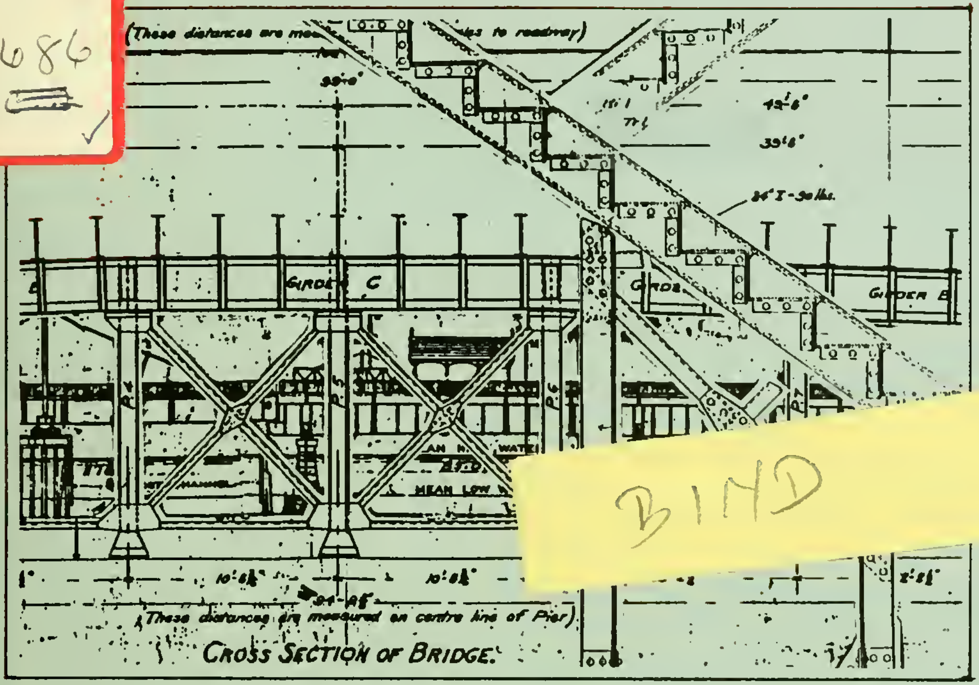
GOVDOC
BRA
1686

BOSTON
PUBLIC
LIBRARY

Government Documents
BRA
1686



BOSTON
PUBLIC
LIBRARY

BIND

Demonstration of Design Potential Fort Point Channel and Summer Street Bridges and Grade Changes

BOSTON REDEVELOPMENT AUTHORITY
GRANT APPLICATION SUBMITTED TO
THE NATIONAL ENDOWMENT FOR THE ARTS
DESIGN ARTS PROGRAM MAY 1984

Boston Redevelopment Authority

Robert J. Ryan/Director

May 14, 1984

Mr. Michael Pittas
Grants Office/DAP
National Endowment for
the Arts
Nancy Hanks Center
1100 Pennsylvania Ave. / N.W.
Washington, D.C. 20506

Dear Mr. Pittas:

The Boston Redevelopment Authority hereby submits a Design Demonstration Grant application for design consultant services.

Boston's recent history has been marked by the city's remarkable capacity for integrating new development with the built environment and urban form which gives Boston its distinctive character.

On its downtown waterfront, and at the Charlestown Navy Yard, Boston established design guidelines which highlighted Boston's relationship to its harbor and to its historic legacy as a maritime city.

Now, with new development about to take place in the Fort Point Channel area district, and with plans for large public works projects in that area, Boston once again has the opportunity to reclaim a chapter from its architectural past while insuring continuity with the city's future growth. Major funding commitments are anticipated for bridge repairs in the Fort Point Channel Area.

Therefore, the BRA, as part of its Boston Tomorrow study, is seeking funds for a design consultant who would study the urban design potential of a series of 19th century bridges. The outstanding design features of these bridges have long been apparent, but the private and public investment proposed for this area now widens the possibilities for increasing public open space and access to the water's edge.

It is our opinion that the city can only take full advantage of this opportunity by initiating a planning process that involves the numerous public agencies, citizen groups and property owners with a common interest in the Fort Point Channel.

1 City Hall Square
Boston, Massachusetts 02201
(617) 722-4300

CB2/K/051084

To date, the BRA by convening the Fort Point Channel Forum, has played an important role in overall planning efforts for this area. But with development pressure building along the Fort Point Channel and Summer Street, it is essential for the city to formulate more specific goals with regard to public actions and public spaces.

It is our hope that the NEA will provide us with funding for the design consultant who can carry out this important work and thus contribute to our larger effort, which is to insure that new growth and development safeguards our part and serves the future. Thank you.

Sincerely yours,

Robert J. Ryan
Director

CB2/K/051084

CITY OF BOSTON • MASSACHUSETTS

OFFICE OF THE MAYOR
RAYMOND L. FLYNN

May 14, 1984

Mr. Michael Pittas
National Endowment for the Arts
Nancy Hanks Center
1100 Pennsylvania Ave. N.W.
Washington, D.C. 20506

Dear Mr. Pittas:

Boston has long viewed the Fort Point Channel area as one part of the city which can accommmodate future growth. The City's planning efforts can enhance new development and activity by exploring the urban design potential of existing structures in the Fort Point Channel area, in particular the attractive bridges which span the channels and the soon-to-be redeveloped railyards.

As we improve access and develop vacant lands in the Fort Point Channel area, there is the opportunity for the existing bridges and grade changes to play an important part in architectural scale and character of this area.

It is for this reason that I wholeheartedly endorse the BRA's proposal for a design consultant who would study the urban design potential of these facilities. This will undoubtedly help us in formulating publically supported design guidelines that encourage a special civic environment for this new urban district.

Sincerely,

Raymond L. Flynn

Raymond L. Flynn
Mayor

BOSTON CITY HALL • ONE CITY HALL PLAZA • BOSTON • MASSACHUSETTS [illegible] • [illegible]

Boston
Landmarks
Commission

City Hall, Boston
Massachusetts 02201
(617) 725-3850

City of Boston
~~Kevin H. White, Mayor~~
Raymond L. Flynn, Mayor
Members
Pauline Chase Harrell,
Chairwoman
Rev. James K. Allen
Stanford O. Anderson
Lawrence A. Bianchi
Libby Blank
Susan S. Davis
Thomas J. Hynes, Jr.
Roger P. Lang
Henry A. Wood

Alternates
Virginia Aldrich
James Alexander
John F. Cooke
Joan E. Goody
Rosalind E. Gorin
Imre Halasz
Luix Overbea
Ellen F. Rosebrock
Carl A. Zellner

Marcia Myers,
Executive Director

May 15, 1984

Michael Pittas
National Endowment for the Arts
Nancy Hanks Center
1100 Pennsylvania Ave, N.W.
Washington, D. C. 20506

Dear Mr. Pittas:

The Boston Redevelopment Authority is seeking NEA assistance to examine the special design characteristics of the Fort Point Channel road network. The Channel, its own bridges, and the adjacent late 19th c. industrial structures with their unusal bi-level acces system is considered to be eligible for listing in the National Register of Historic Places by the Boston Landmarks Commission. Assessment of the design potential of these unusual components is essential to their preservation. The district is under pressure from multiple development endeavors, which , if adequately guided, can achieve overall conservation of the district.

The Fort Point Channel proposal is akin to the BRA guidelines project for the Ground Plane treatment at the Boston Naval Shipyard at Charlestown, supported by the NEA in 1978. The adroitness of the Shipyard guidelines has ensured retention and in places restoration of the district context. As one of the public agencies to be included in the Fort Point Channel area guidelines development process, the Landmarks Commission will be looking for similar quality and sensitivity as was produced in the Shipyard guidelines.

The Boston Landmarks Commission supports the BRA's project request for the Fort Point Channel, and urges the Endowment to select the project as a critical design demonstration for Boston.

Sincerely,

Marcia Myers
Executive Director

Greater Boston
Chamber of Commerce
125 High Street
Boston, MA 02110
Tel: 426-1250

May 14, 1984

Mr. Michael Pittas
National Endowment for the Arts
Nancy Hanks Center
1100 Pennsylvania Avenue, N.W.
Washington, D.C. 20506

Dear Mr. Pittas:

On behalf of the Greater Boston Chamber of Commerce, I am writing in support of an application by the Boston Redevelopment Authority to N.E.A. for a Design Demonstration Grant. This grant will enable the Authority to study the design potentials of several bridges and grade changes for the Fort Point Channel area of Boston -- an area on the verge of major, new development and one of tremendous import to the City because of its two miles of waterfront land, its numerous buildings of architectural and historic importance and its location between two urban neighborhoods.

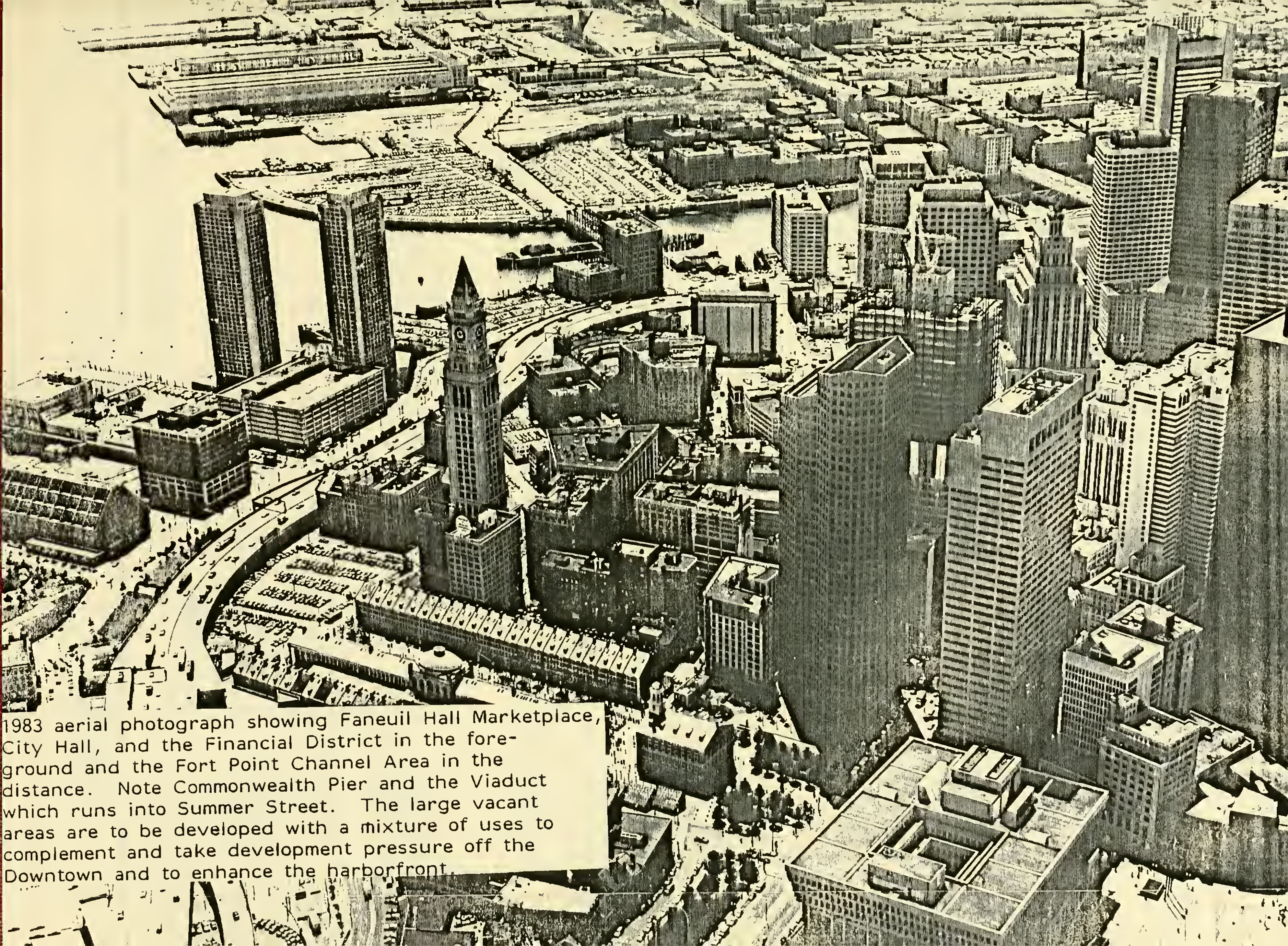
Development of guidelines to plan for and guide further growth in the Fort Point Channel area is critical. The Boston Redevelopment Authority's work program outlined in its application to N.E.A. is a beginning step. In addition, study of the design potential of the area's bridges (and grades) will enable the Authority to consider these special, architecturally and historically-significant features as major traffic improvements and mixed-use developments are being planned for the Fort Point Channel area.

We hope you will favorably consider the Boston Redevelopment Authority's application for an Arts Design Demonstration Grant.

Sincerely,

Simone Auster
Vice President,
Community Development

SA/jn



1983 aerial photograph showing Faneuil Hall Marketplace, City Hall, and the Financial District in the foreground and the Fort Point Channel Area in the distance. Note Commonwealth Pier and the Viaduct which runs into Summer Street. The large vacant areas are to be developed with a mixture of uses to complement and take development pressure off the Downtown and to enhance the harborfront.

Design Arts

Organization Grant Application Form NEA-3 (Rev.)

Three clear copies must be submitted to: Grants Office/DAP, National Endowment for the Arts, Nancy Hanks Center, 1100 Pennsylvania Avenue, N.W., Washington, D.C. 20506

I. Applicant Organization (name, address, zip)

Boston Redevelopment Authority
1 City Hall Square
Boston, MA 02201

II. Category under which support is requested:

☒ Design Demonstration
☐ Design Exploration/Research
☐ Design Communication

III. Period of support requested:

	month	day	year
Starting	12	3	84
Ending	12	3	85

IV. Summary of project description (Complete in space provided. DO NOT reduce copy or continue on additional pages.)
TITLE (Please underline):

The Boston Redevelopment Authority seeks a National Endowment for the Arts Design Demonstration Grant to obtain the services of a design consultant to study the design potentials of a series of bridges and grade changes in the Fort Point Channel Area of Boston.

A special characteristic of the Fort Point Channel Area District is its bridges which were built in the 19th century to span the channel and rail lines. In addition to their continuing traffic function they provide a series of special historic features, over-water promontories, and exciting opportunities for incorporating grade changes in new development.

The set of bridges are a prominent urban design element in the district now under study as part of the BRA's Boston Tomorrow Design Guidelines Process. As well, the bridges are part of millions of dollars worth of traffic improvement projects being planned for the area. The NEA grant would enable the elevated spine of Summer Street with its series of bridges to serve as a major civic design component to be considered in plans for infrastructure investment and private development.

The NEA funded design consultant would, based on the general inventory and analysis materials prepared by BRA staff and the citizen's group, prepare a more detailed assessment of the design potentials of the Summer Street bridges and the Viaduct. The design consultant would work with BRA staff, other public agencies, the citizen's group, and affected property owners, individually, and this work would become part of the district guidelines.

V. Estimated number of persons expected to benefit from this project: 500,000

VI. Summary of estimated costs (recapitulation of budget items in Section IX)

	Total costs of project (rounded to nearest ten dollars)
A. Direct Costs	
Salaries and wages	$ 9,030
Fringe benefits	5,906
Supplies and materials	2,000
Travel	
Permanent equipment	
Fees and Other	41,000
Total direct costs	$ 57,936
B. Indirect costs	$ 6,225
Total project costs	$ 64,161

VII. Total amount requested from the National Endowment for the Arts: $ 30,000

VIII. Organization total fiscal activity

	Most recently completed fiscal year	Estimated for current fiscal year
A. Expenses	1. $ 14,300,000	2. $ 16,000,000
B. Revenues, grants, & contributions	1. $ 14,300,000	2. $ 16,000,000

Do not write in this space

Budget breakdown of summary of estimated costs

A. Direct costs

1. Salaries and wages

Title and/or type of personnel	Number of personnel	Annual or average salary range	% of time devoted to this project	Amount $
Administrative Review				
Susan Allen, Deputy Director for Development Policy				
		$42,000	1%	500
Staff Information and Review				
Sr. Architects Planners, Landscape Architects, Project Coordinators, Traffic Planners				
	10	Ave. 32,650	2%	6,530
Staff Research and Design				
Architects	2	Ave. 23,000	4%	2,000

Total salaries and wages $ 9,030
Add fringe benefits $ 5,906
Total salaries and wages including fringe benefits $ 14,936

2. Supplies and materials (list each major type separately)

	Amount $
Mapping and Graphic Materials	2,000

Total supplies and materials $ 2,000

3. Travel

Transportation of personnel

No. of travelers	from	to	Amount $

Total transportation of personnel $

Subsistence

No. of travelers	No. of days	Daily rate	$

Total subsistence $
Total travel $

IX. Budget breakdown of summary of estimated costs (continued)

4. Permanent equipment

	Amount
	$
Total permanent equipment	$

5. Fees for services and other expenses (list each item separately)

	Amount
Consultant Services	$
BRA Urban Design In-house Consultants	
Project Director, Urban Designer	6,000
District Urban Designer	5,000
Design Consultant	30,000
Total fees and other	$ 41,000

B. Indirect costs

Rate established by attached rate negotiation agreement with National Endowment for the Arts or another Federal agency

Amount

Rate 24 % Base $ 25,936 $ 6,225

X. Contributions, grants, and revenues (for this project)

A. Contributions

1. Cash

	Amount
	$

2. In-kind contributions (list each major item)

Salaries and Wages	14,936
Mapping and Graphics Materials	2,000
BRA In-house Consultants	11,000
Indirect Costs	6,225
Total contributions	$ 34,161

B. Grants (do not list anticipated grant from the Arts Endowment)

	$
Total grants	$

C. Revenues

	$

XI. State Arts Agency notification

The National Endowment for the Arts urges you to inform your State Arts Agency of the fact that you are submitting this application.

Have you done so? X yes ___ no

XII. Certification

We certify that the information contained in this application, including all attachments and supporting materials, is true and correct to the best of our knowledge.

Authorizing official(s)

Signature X ____ Date signed 5-15-84
Name (print or type) Robert J. Ryan
Title (print or type) Director
Telephone (area code) (617) 722-4300 x201

Signature X Susan Allen Date signed 5-15-84
Name (print or type) Susan Allen
Title (print or type) Deputy Director for Development Policy
Telephone (area code) (617) 722-4300 x228

Project director

Signature X Barbara L. Barros Date signed 5-10-84
Name (print or type) Barbara L. Barros
Title (print or type) Urban Designer
Telephone (area code) (617) 722-4300 x232

*Payee (to whom grant payments will be sent if other than authorizing official)

Signature X Joseph J. Noonan Date signed 5-15-84
Name (print or type) Joseph J. Noonan
Title (print or type) Controller
Telephone (area code) (617) 722-4300 x360

*If payment is to be made to anyone other than the grantee, it is understood that the *grantee* is financially, administratively, and programmatically responsible for all aspects of the grant and that all reports must be submitted through the grantee.

BE SURE TO DOUBLE CHECK THE "HOW TO APPLY" SECTION ON PAGE 18 AND THE SPECIAL APPLICATION REQUIREMENTS FOR YOUR CATEGORY FOR ALL MATERIALS TO BE INCLUDED IN YOUR APPLICATION PACKAGE. INCOMPLETE APPLICATIONS WILL BE JEOPARDIZED IN THE REVIEW PROCESS.

Privacy Act

The Privacy Act of 1974 requires us to furnish you with the following information:

The Endowment is authorized to solicit the requested information by Section 5 of the National Foundation on the Arts and the Humanities Act of 1965, as amended. The information is used for grant processing, statistical research, analysis of trends, and for congressional oversight hearings. Failure to provide the requested information could result in rejection of your application.

Assurance of Compliance with National Endowment for the Arts Regulations under Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, and Title IX of the Education Amendments of 1972.

Boston Redevelopment Authority (hereafter called the "Applicant")
Hereby Agrees that it will comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.), Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and, where applicable, Title IX of the Education Amendment of 1972 (20 U.S.C. 1681 et seq.) and all regulations of the National Endowment for the Arts issued pursuant to these statutes. Title VI, Section 504, and Title IX prohibit discrimination on the basis of race, color, national origin, handicap, or sex in any program or activity receiving Endowment support. The Applicant **Hereby Gives Assurance** that it immediately will take any measures necessary to comply.

This assurance shall obligate the Applicant for the period during which the federal financial assistance is extended. There are two exceptions. If any personal property is acquired with Endowment assistance, this assurance shall obligate the Applicant for the period during which it retains ownership or possession of that property. If any real property or structure is improved with Endowment support, this assurance shall obligate the Applicant or any transferee for as long as the property or structure is used for the grant or similar purposes.

This assurance is given in connection with any and all financial assistance from the Endowment after the date this form is signed. This includes payments after such date for financial assistance approved before such date. The Applicant recognizes and agrees that any such assistance will be extended in reliance on the representations and agreements made in this assurance, and that the United States shall have the right to seek judicial enforcement of this assurance. This assurance is binding on the Applicant, its successors, transferees, and assignees, and on the authorized official whose signature appears below.

Boston Redevelopment Authority
Applicant

One City Hall Square
Applicant's mailing address

Boston, Massachusetts 02201

Director
By (President, Chairman of the Board, or comparable authorized official)

Dated

Designer Selection Process

The Design Consultant would be selected according to Boston Redevelopment Authority Request-For-Qualifications processes. A sample public notification would be as follows:

Design Consultant Services

Sought for

Fort Point Channel Area District Bridge Study

The Boston Redevelopment Authority requests Letters of Interest and Statements of Qualifications to undertake Design Consultant Services. The Design Consultant would assess the design potentials of the bridges and grade changes along Summer Street and the Viaduct as part of the BRA Boston Tomorrow Fort Point Channel Area District Guidelines process. The design consultant services will include preparation of conceptual and schematic plans for enhancement of public ways and structures and preparation of concepts for massing and circulation within private developments to take advantage of the bridges and grade changes. The consultant will work with BRA staff, other public agencies, citizens groups, and individual property owners to arrive at a publically-supported plan.

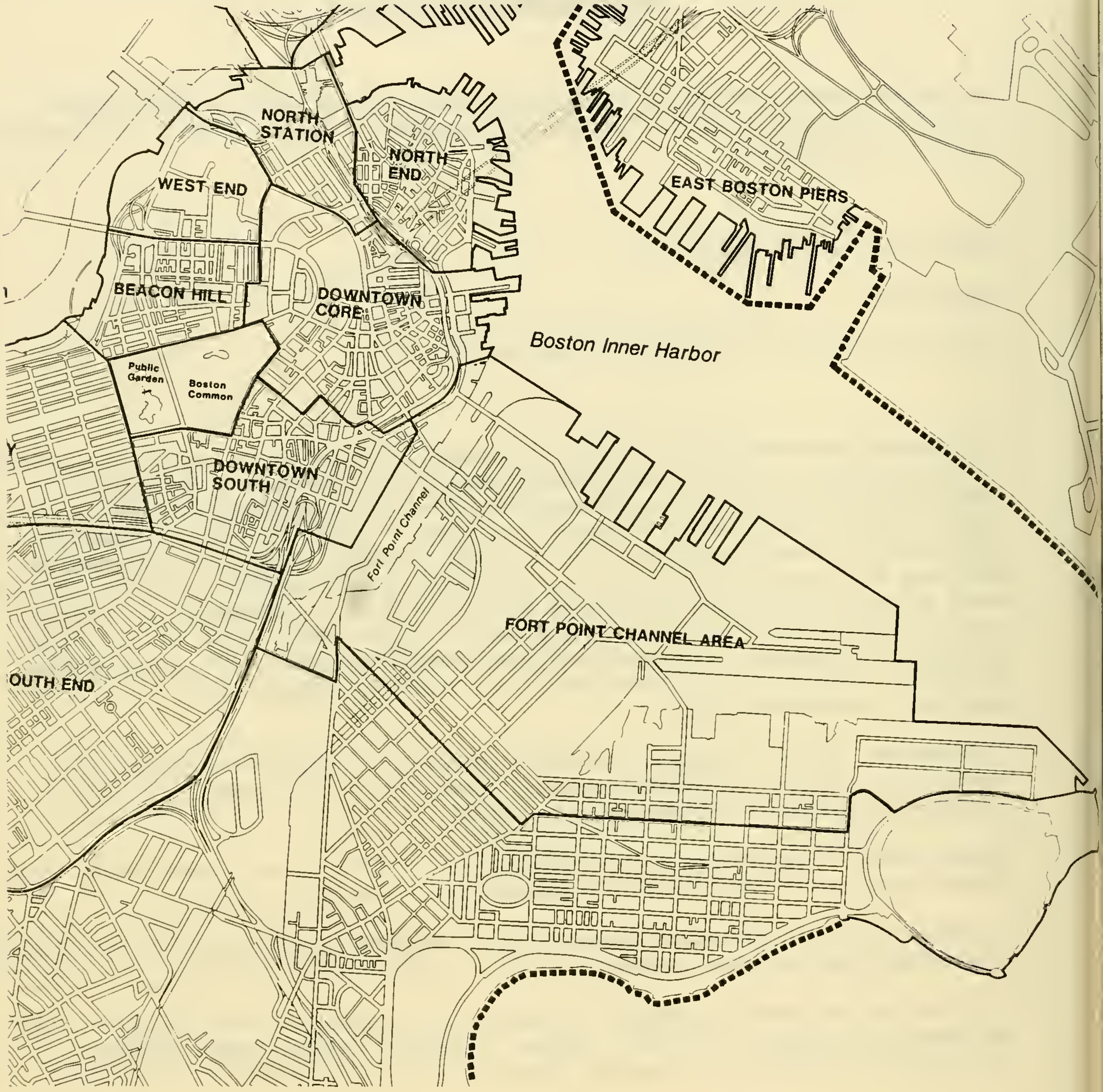
The design consultant should demonstrate site planning and engineering capabilities and the ability to develop, communicate, and work with citizens on complex, imaginative urban design concepts.

Based upon review of initial submissions, the Authority will select those to be interviewed, with final selection expected on or about ____________.

Interested firms/individuals should submit completed GSA Standard Form 254/255 (Architect-Engineer and Related Services Questionnaire) by _______________.

For further information package including site information and expanded Scope of Services, contact: Robert J. Ryan, Director, Boston Redevelopment Authority, One City Hall Square, Boston, MA 02201, phone (617) 722-4300.

Kane Simonian, Secretary
Boston Redevelopment Authority


NORTH STATION
NORTH END
WEST END
EAST BOSTON PIERS
BEACON HILL
DOWNTOWN CORE
Boston Inner Harbor
Public Garden
Boston Common
DOWNTOWN SOUTH
Fort Point Channel
FORT POINT CHANNEL AREA
OUTH END

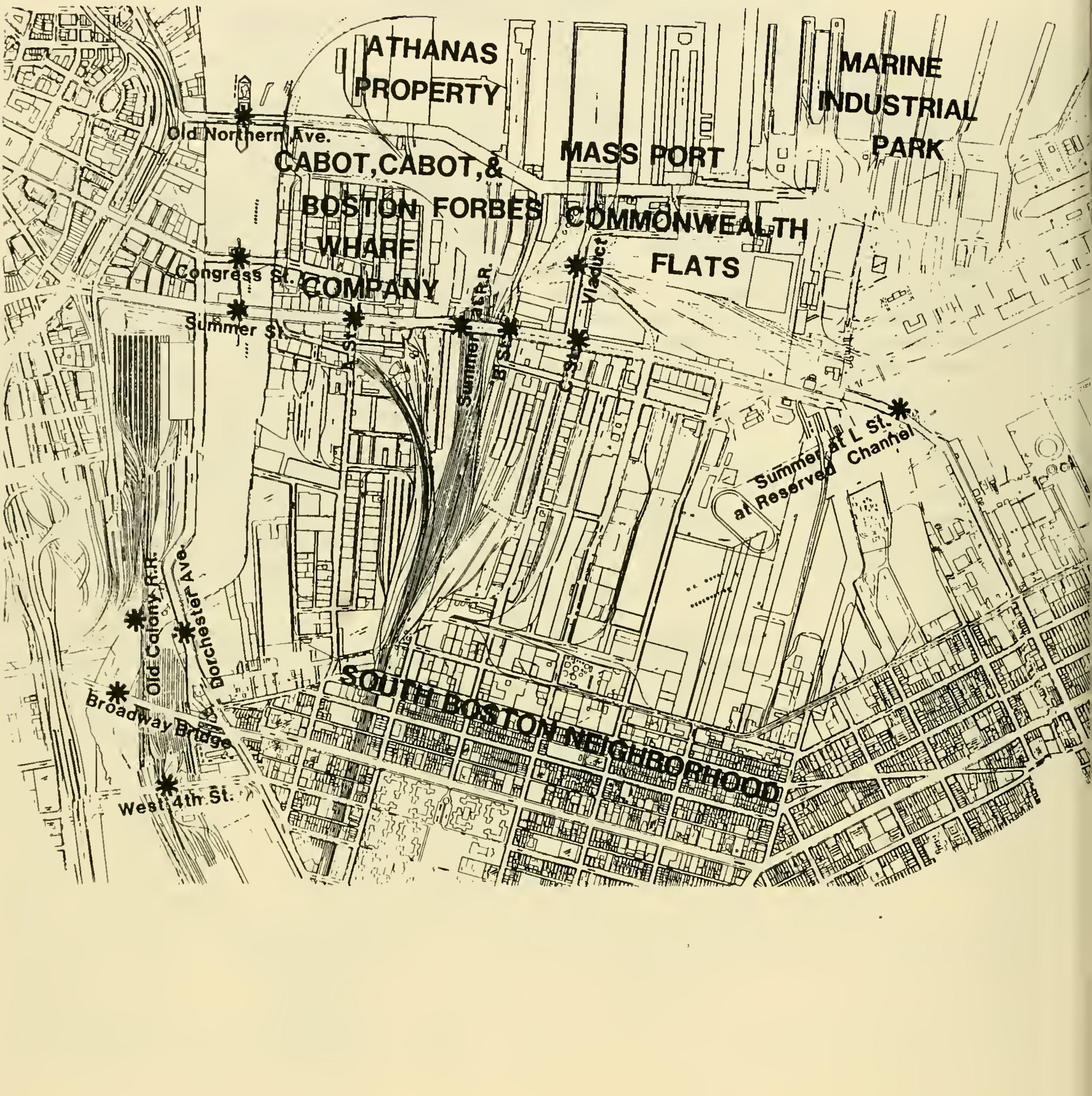
NEA GRANT APPLICATION
Design Demonstration
Fort Point Channel Area District Bridges

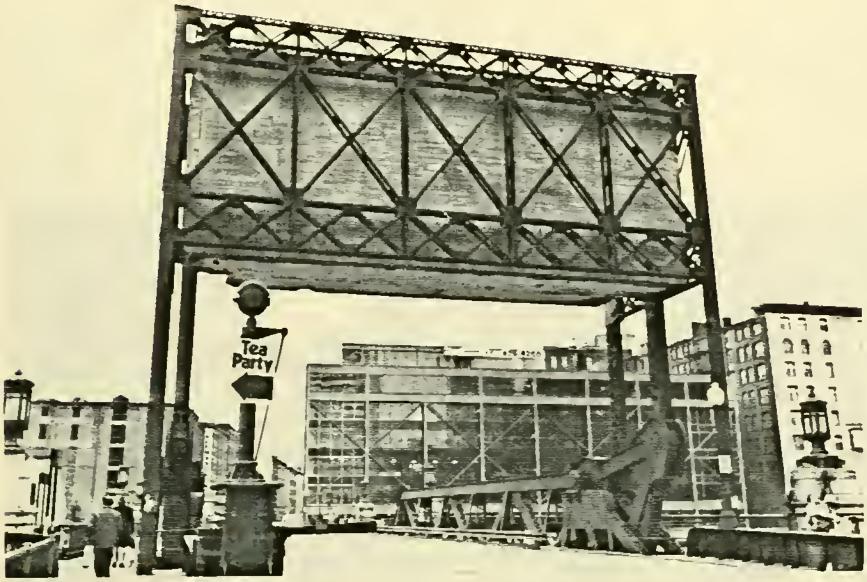
Project Background

The BRA in coordination with the new City Administration of Mayor Raymond Flynn is undertaking Density, Microclimate, and District Studies in order to arrive at guidelines for development in Boston. The Fort Point Channel Area is among the first set of study districts - those having the greatest development pressures or opportunities. The district planning processes involve the analysis of the district's structure; patterns of use and activity; vehicular circulation; pedestrian network, open space, and views; architectural form; and historically significant structures, patterns, and areas. BRA staff, consultants, citizen's groups, property owners and public agencies will work together to better understand the district's assets, problems, and potentials and put together urban design guidelines derived from that understanding.

The investment proposals which impact the bridges include: the upgrading of five city bridges on Summer Street; the development by Massport of the Commonwealth Flats on either side of the Viaduct; the development of former railyards below Summer Street; plans for a Seaport Access/Harbor Tunnel route into the area; and the building of a new Northern Avenue bridge across the channel and reuse of the old bridge for public open space.

The Northern Avenue bridge projects are currently receiving design attention. The other bridges and grade changes also provide special opportunities as the sites surrounding them are transformed into the major commercial/office area immediately adjacent to Boston's downtown core. The NEA design consultant would enable these unique features to play a significant role in shaping the public environment of a new district.

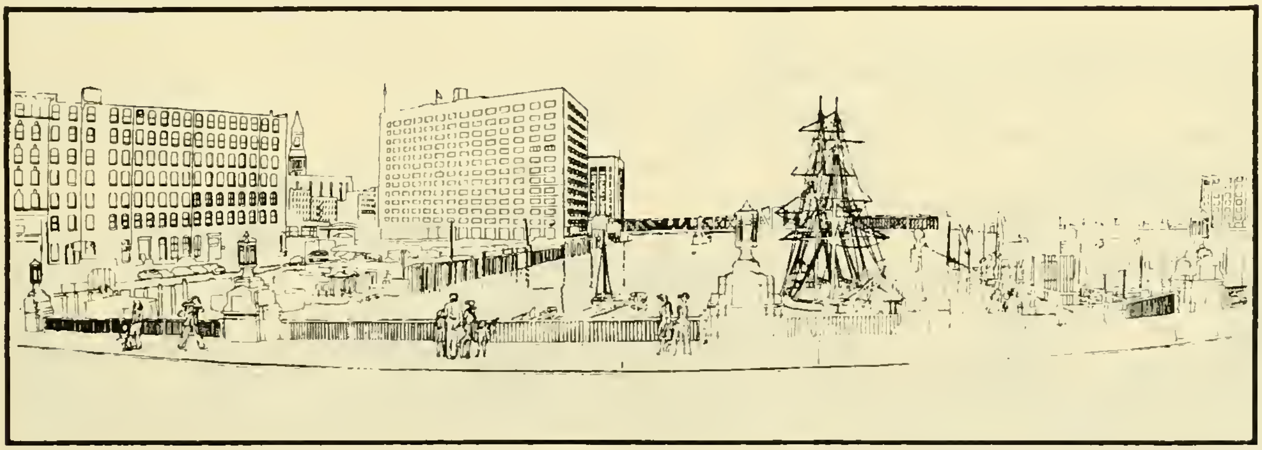

ATHANAS PROPERTY
MARINE INDUSTRIAL PARK
Old Northern Ave.
CABOT, CABOT, & BOSTON FORBES WHARF COMPANY
MASS PORT
COMMONWEALTH FLATS
Viaduct
Congress St.
Summer St.
A St.
Summer at R.R.
B St.
C St.
Summer at L St.
Summer at Reserved Channel
Old Colony R.R.
Dorchester Ave.
Broadway Bridge
West 4th St.
SOUTH BOSTON NEIGHBORHOOD



INVENTORY Congress Street Bridge

The Congress Street Bridge was constructed in 1930 as an electrically operated bascule draw bridge. The counter weight is still in place and provides a sense of gateway when crossing the bridge. The elegant light standards remain. The bridge has been repaired and posted for weight restrictions.

The bridge serves as a major link between Downtown Boston and the Fort Point Channel and South Boston Areas. Numerous pedestrians, including tourists, cross this bridge from the Downtown and the South Station train, bus, and subway terminals on the west side of the channel on their way to Museum Wharf and the Boston Wharf Company area. The Boston Tea Party Museum and the Beaver II, reproduction of the famous 18th century brig, are directly off the Congress Street Bridge.



Existing View from Congress Street Bridge North Toward Harbor

Congress Street at Fort Point Channel

The earliest route connecting the Boston Wharf property with downtown Boston was the Congress Street Bridge, erected in 1878. Congress Street, originally Eastern Avenue, was laid out across the mud flats and in 1892 crossed the Reserved Channel on what is today the L Street Bridge. The presence of the railroad yards however, made this route a hazardous one, and in the 1890's as part of the general movement to eliminate grade crossings, Congress Street was terminated at the yards.

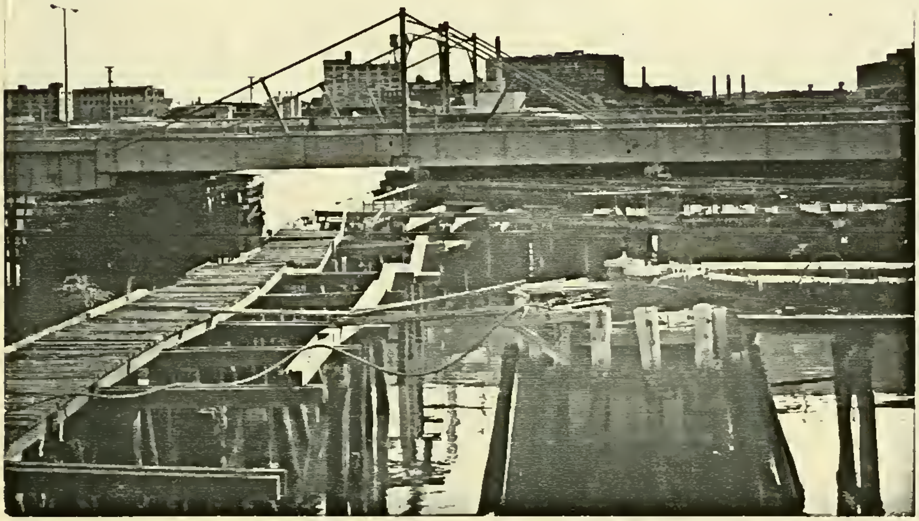
In the meantime, the development of the Boston Wharf property set in motion by the Congress Street Bridge had accelerated. By 1900, a solid wall of masonry lined Congress Street as far as the yards.

"All the great retail firms of this city make this their initial point of receipt, and there in the great warehouses which cover the entire district, are stored temporarily millions of dollars worth of goods." The city engineer went on to report that the Congress Street Bridge was crossed by more teams daily than any other in Boston. Even after the construction of the adjacent Summer Street Bridge in 1901, teams continued to use the Congress Street Bridge because of the easier gradient.

The original Congress Street Bridge, a steam-operated steel swing draw span, was not replaced until 1930, when the present bridge was constructed. The new bascule draw was electrically operated, and furnished a channel 75 feet in width.

The Congress Street Bridge is the most recent of the five moveable truss bridges spanning Fort Point Channel. Taken together, the collection forms an extraordinarily rich bridge district, which, for its size, is thought to be unmatched in variety by any other area of the country.

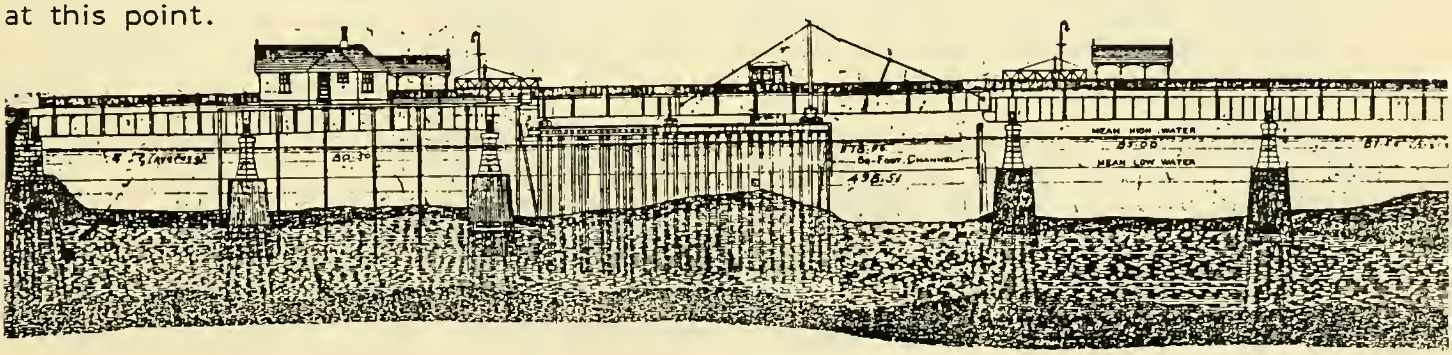
- Peter Stott, Massachusetts Historical Commission

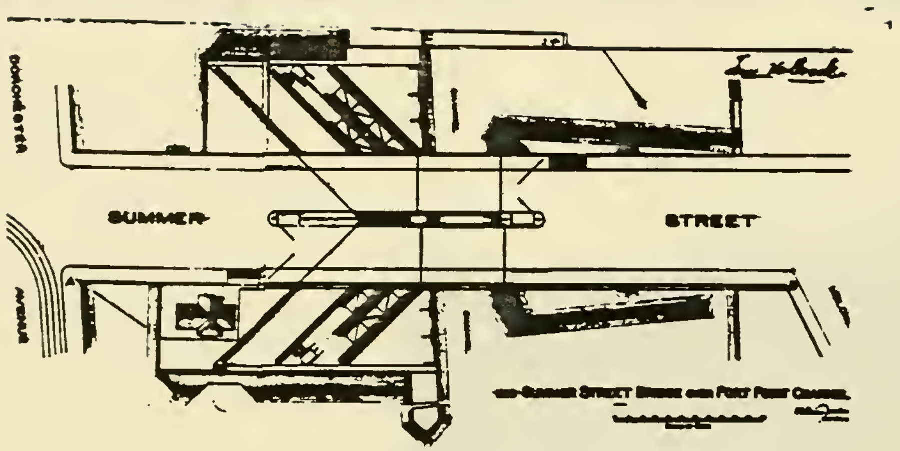


INVENTORY Summer St. Bridge

The Summer Street Bridge over the channel was constructed as a double retractable bridge in 1889 to accommodate railroad traffic. The electrical draw was operated from a small office on the southwest side of the bridge and pedestrians waited for closures in sheds at either end. In 1957, the motors were removed and time piles supporting the retractable rails have deteriorated. In order to accommodate the current live load, the deck must be replaced and stringers added to each bay.

Summer Street is a major link between the South Boston and Fort Point Channel areas and Downtown Boston. The bridge can serve as a special gateway for pedestrains and motorists. It also provides over-water promontories and views. Although it is unlikely that operable spans will reappear in the channel, it would be possible to exhibit and explain the enormous historic and technological significance of the bridge to pedestrians as they cross. The plans for pedestrian access circumnavigating the channel would call for specially designed connections at this point.





Summer Street at Fort Point Channel

Where Summer Street crossed Fort Point Channel, the City erected the Summer Street Bridge, a retractile draw like that over the Reserved Channel several hundred yards to the east. Like the original 1877 Dover Street retractile (no longer extant), the bridge is a retractile: the parallel spans pull away from the center in opposite directions.

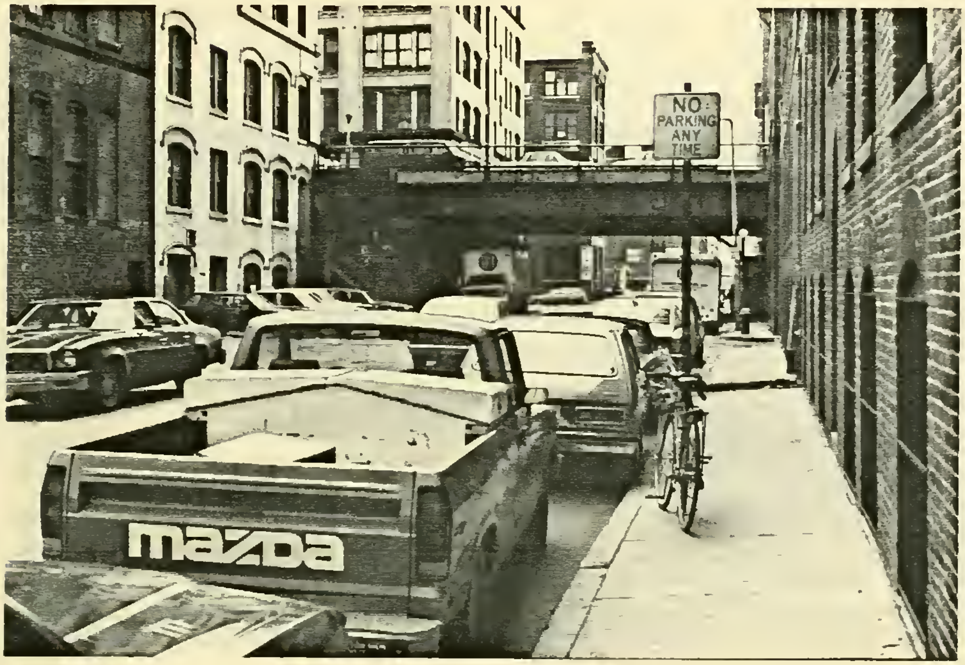
The electrically operated draw was operated from a small office in the southwest side of the bridge. On both sides of the bridge were small roofed waiting areas over the sidewalks where in inclement weather, pedestrians could stand waiting for the draw to close. Both waiting areas and operator's office had gable roofs with medieval-style half-timbering in the gable ends.

The Summer Street alignment had been used since 1855 by the New England Railroad (originally the Midland Railroad) to reach its passenger and freight terminals at what is today Dewey Square. The tracks deadheaded in a passenger terminal at the site of South Station, whose construction in the late 1890's allowed the discontinuance of the railroad's swing bridge over Fort Point Channel and the construction of the present bridge.

The construction of the Summer Street Bridge marked the beginning of an enormous expansion of wool warehouses in the Fort Point Channel area. Previously clustered in the Dewey Square area, after the completion of the bridge, they "moved in columns, as it were, across the Channel to take possession of the new buildings erected along the extension of Summer Street on the South Boston side". Principal instigator of the bridge was the Boston Wharf Company's president, Joseph B. Russell.

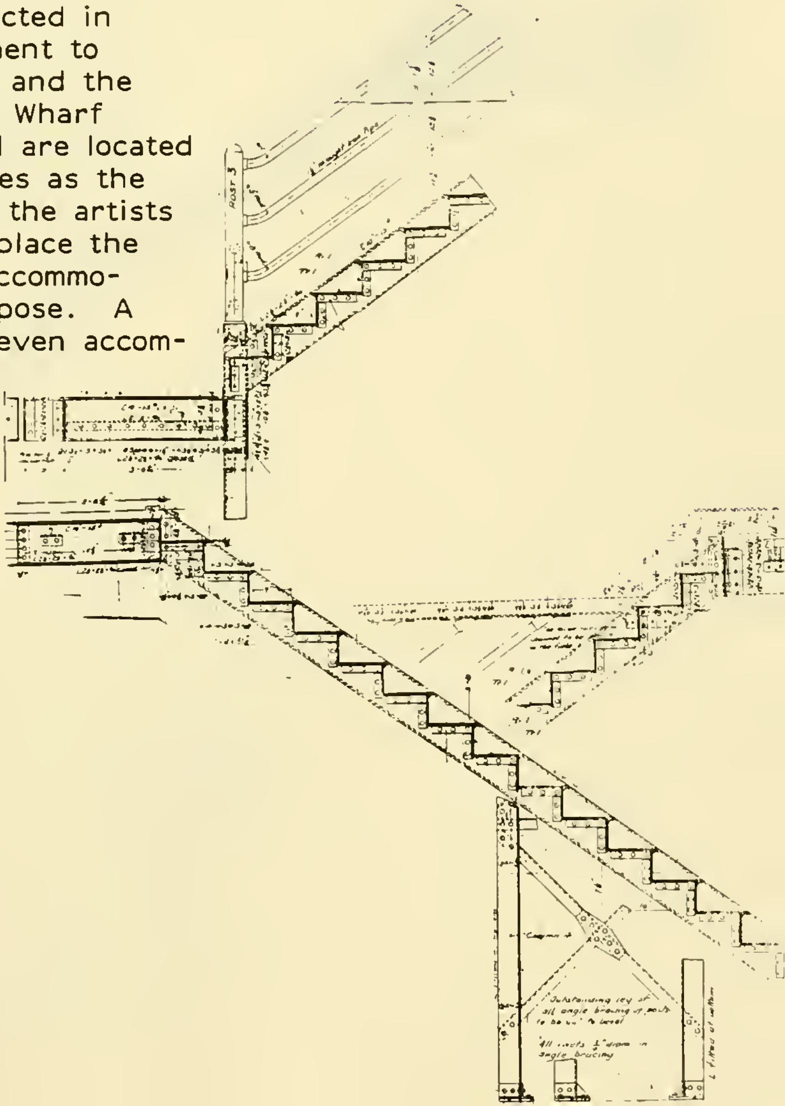
Today, the draw span motors removed, the bridge no longer functions, and the piles supporting the retractile rails are deteriorating. Despite its condition, the bridge, the larger of the two Boston retractile spans, is one of the key elements in the rich Fort Point Channel Bridge District.

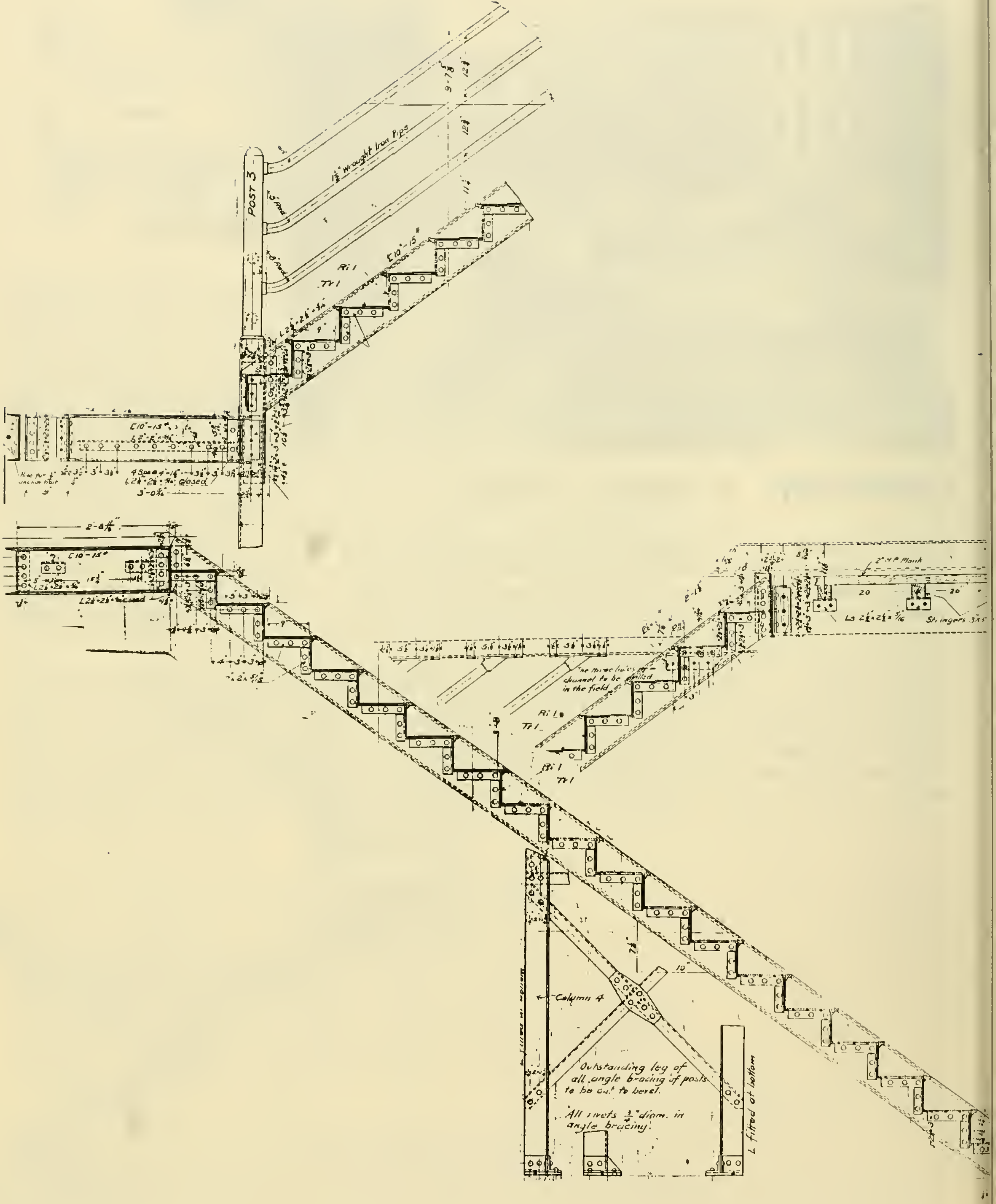
- Peter Stott, Massachusetts Historical Commission



INVENTORY A Street Bridge

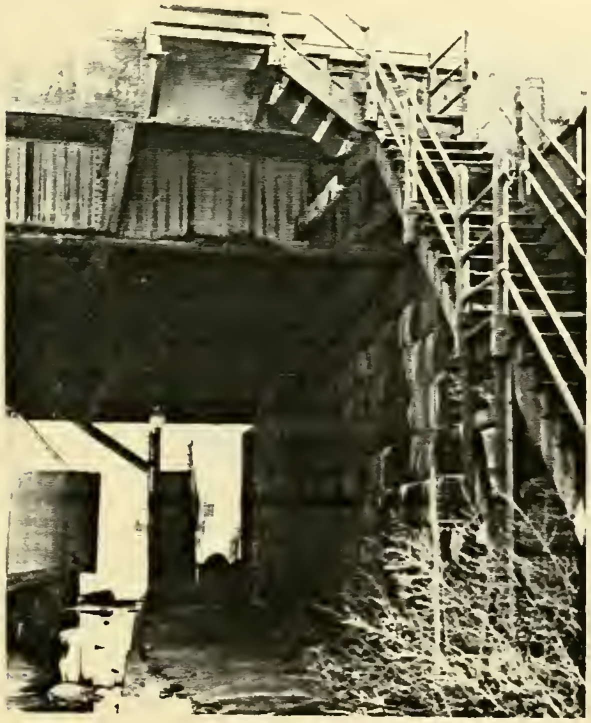
Summer Street over A Street was constructed in 1900. Today the girders need reinforcement to accommodate the dead load of a 1955 slab and the heavy truck live load. Here, the Boston Wharf Companies dual levels become evident and are located by a stairway. As this intersection serves as the 100% corner of the printing industry and the artists community, it would be appropriate to replace the existing stairway with one that is more accommodating, exciting, and symbolic of its purpose. A small loading area at 330 A Street might even accommodate part of a stair tower.

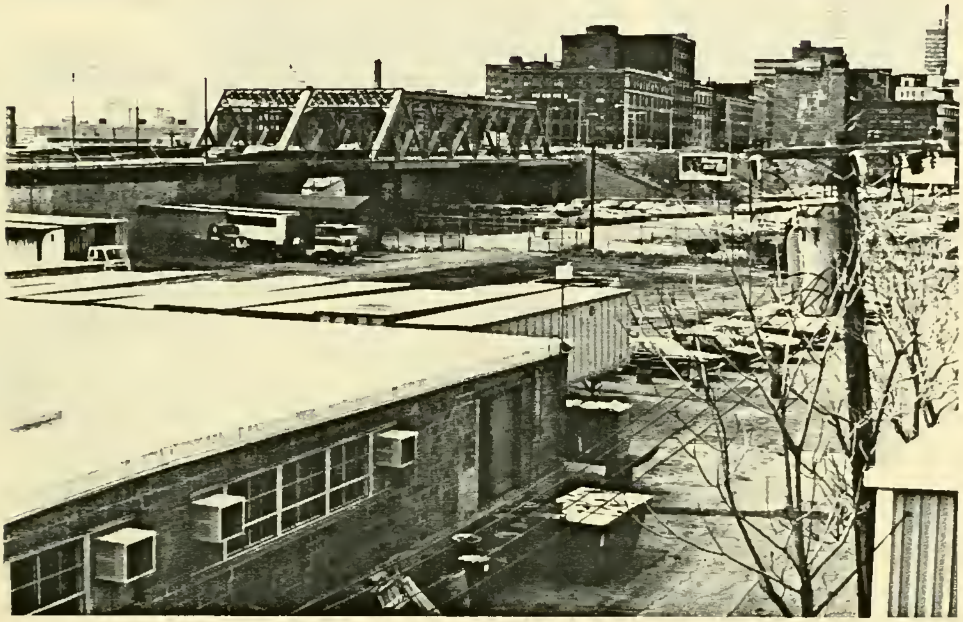



POST 3
1½" Wrought Iron Pipe
9-7⅞
12¼
12¼
11¼
C10"-15#
Ri 1
Tr 1
L2½"×2½"×¼"
C10"-15#
Hole for ¾" anchor bolt
4 Spa @ 4" = 1'4"
L2½"×2½"×¼" Closed
3'-0¾"
2'-8⅞"
C10"-15#
15¾
L2½"×2½"×¼"
L2½"×2½"×¼" closed
The three holes in channel to be drilled in the field
Ri 1a
Tr 1
Ri 1
Tr 1
2'-1⅝
2" H.P. Plank
20
20
Ls 2½"×2½"×5/16
Stringers 3"×5
Column 4
10"
Outstanding leg of all angle bracing of posts to be cut to bevel.
All rivets ¾" diam. in angle bracing.
L fitted at bottom

INVENTORY B Street Bridge

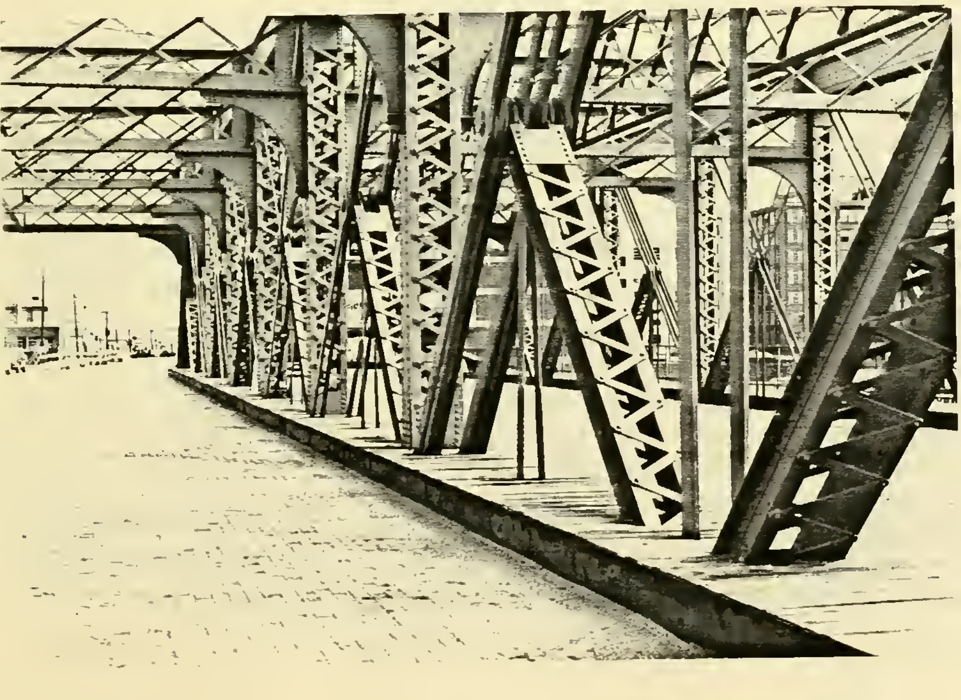
Summer Street over B Street consists of three pin-connected trusses which carry two 25.5 ft. roadways and two cantilevered sidewalks. A minimal repair program would entail reinforcing the flances but ideally the bridge should be completely reconstructed. Since most of the land below this crossing will be developed at some future date, it seems best to do a temporary fix-up and then plan and design the bridge as an integral part of any future construction. Activities along the second level would help to pedestrianize this important link from South Station to the new Boscom complex.





INVENTORY Summer St. R.R. Bridge

The Summer Street railroad bridge is a fixed span Baltimore truss, 710 feet long. Each span is made of three pin connected trusses, 18' above the tracks. The State owns and operates the current structure.

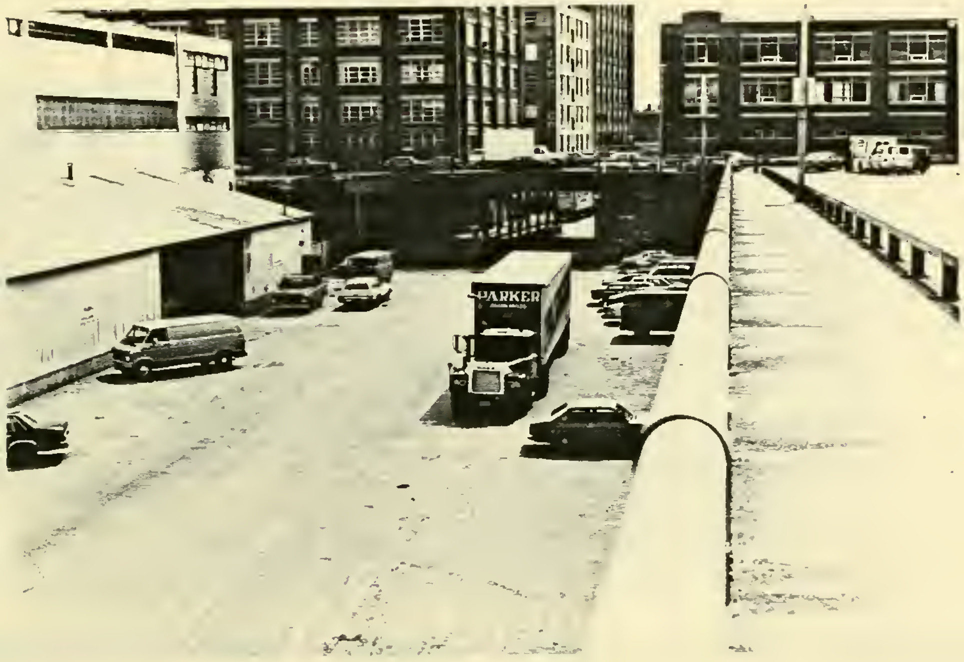


Summer Street Over Railroad Yards

To eliminate the hazardous grade crossing of Congress Street at the railroad yards, the Legislature authorized in 1896 a new route, extending Summer Street across Fort Point Channel. Because of the heavy traffic in teams expected to the state's docks, the route was designed to reduce the grade required to an absolute minimum. A stone and steel viaduct was built by the city from Fort Point Channel over A, B, and C Streets to the edge of the railroad yards. The New England Railroad itself was charged with erecting the bridge over its own lands.

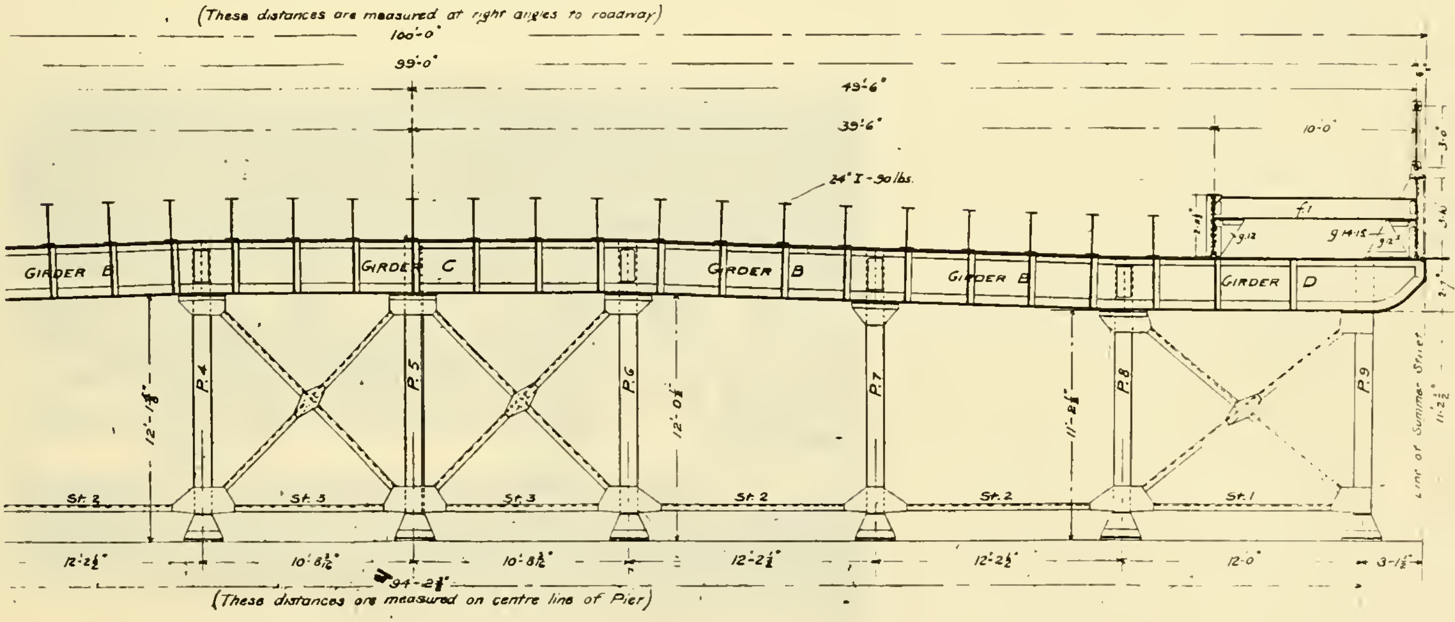
The railroad bridge is a four-span steel Baltimore truss 710 feet in length. Each span is made up of three pin-connected trusses 18 feet above the level of the tracks. The bridge, which was completed in 1901, was built by the Edge Moor Branch of the American Bridge Company according to the designs of the railroad's engineering department, William H. Moore, bridge engineer.

- Peter Stott, Massachusetts Historical Commission



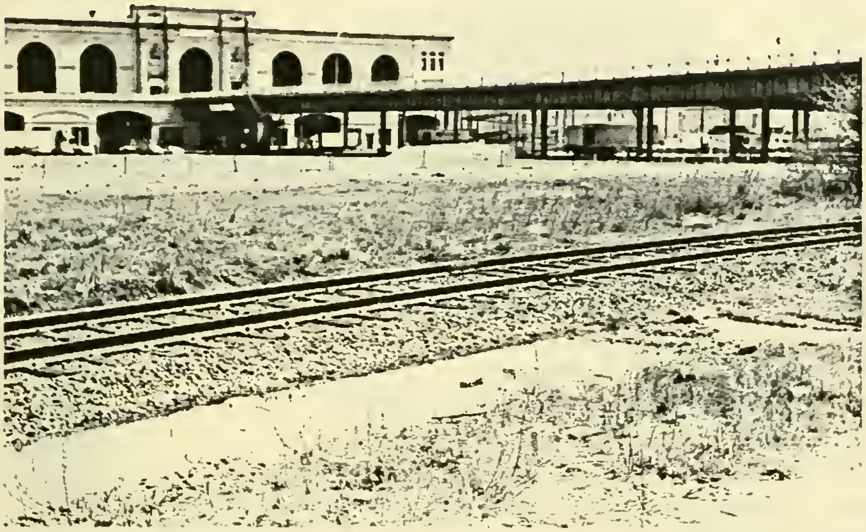
INVENTORY C Street Bridge

The 100 ft. wide Summer Street over C Street is 65' long. It is damaged extensively and in need of total replacement. When funding is allocated, it would be C Street, Summer Street, and the Viaduct and to provide human scale and texture for this important node on the route to the new BosCom complex.



CROSS SECTION OF BRIDGE.

SUMMER STREET BRIDGE OVER C STREET.—SHEET NO. 6.



INVENTORY Commonwealth Pier/Viaduct

The Viaduct functions as a grand axis to the Beaux-Arts facade of Commonwealth Pier. High tech and office uses are planned by Massport for the peir and the vacant "flats" area. The relationship between the viaduct and new buildings, open spaces, and walkways offer exciting possibilities. Future development of Commonwealth Flats could include multilevel connections and views between this grand avenue and the harborfront activity along Northern Avenue. A more elegant stairway at the pier end would be appropriate. Current plans anticipate changing the location of the ramp street connection.

Commonwealth Pier and Viaduct

Commonwealth Pier is a neo-classical monument to the aspirations of the Port of Boston and to a vast complex of wharves, freight terminals, and new industries which generations of Boston businessmen hoped to see built on the Commonwealth's unclaimed mudflats in South and East Boston. It was, its directors boasted during construction, "the largest and best equipped pier in the country," designed to signal the re-emergence of Boston as an important 20th-century industrial and commercial port.

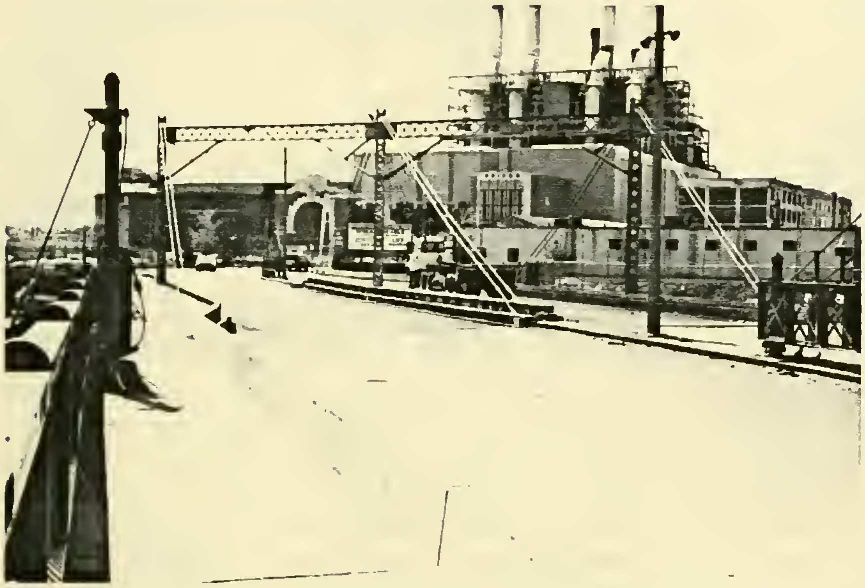
Pier Five itself had been constructed by the Board of Harbor & Land Commissioners in 1900, although no superstructure had been constructed, and for over a decade the pier remained unused. In October 1912, plans and estimates were outlined for a buildings and a grain elevator estimated to cost $1.2 million. However, to attract steamship lines, particularly the Hamburg-American Line, the plans were changed, the pier enlarged, and the headhouse redesigned as an appropriate monument to advertise Boston. In 1913, the Directors announced that fourteen steamship lines had begun, or were about to begin, service to Boston.

Architect for the redesign was the Bostonian Henry F. Keyes (1879-1923), also credited with the design of the adjacent Fish Pier. The new structures designed by Keyes and engineer Frank Hodgdon covered the entire pier, and consisted of a four-story headhouse, and, perpendicular to it, three parallel sheds extending to the end of the pier.

Reflecting the separate freight and passenger access to the pier, the reinforced concrete and steel-frame head house consists of a two-story base for rail and other freight traffic, while above it, at the level of the third story, a ramp from the Summer Street Viaduct provides vehicular access to the passenger section of the building. The monumental two-story upper-level facade consists of an arcade nine bays across, arranged symetrically around a triumphal arch motif and faced with cast-stone ashlar. Dolphins, ships, urns, eagles, and a full classical entablature make the facade one of the best examples of public Beau-Arts architecture in Boston.

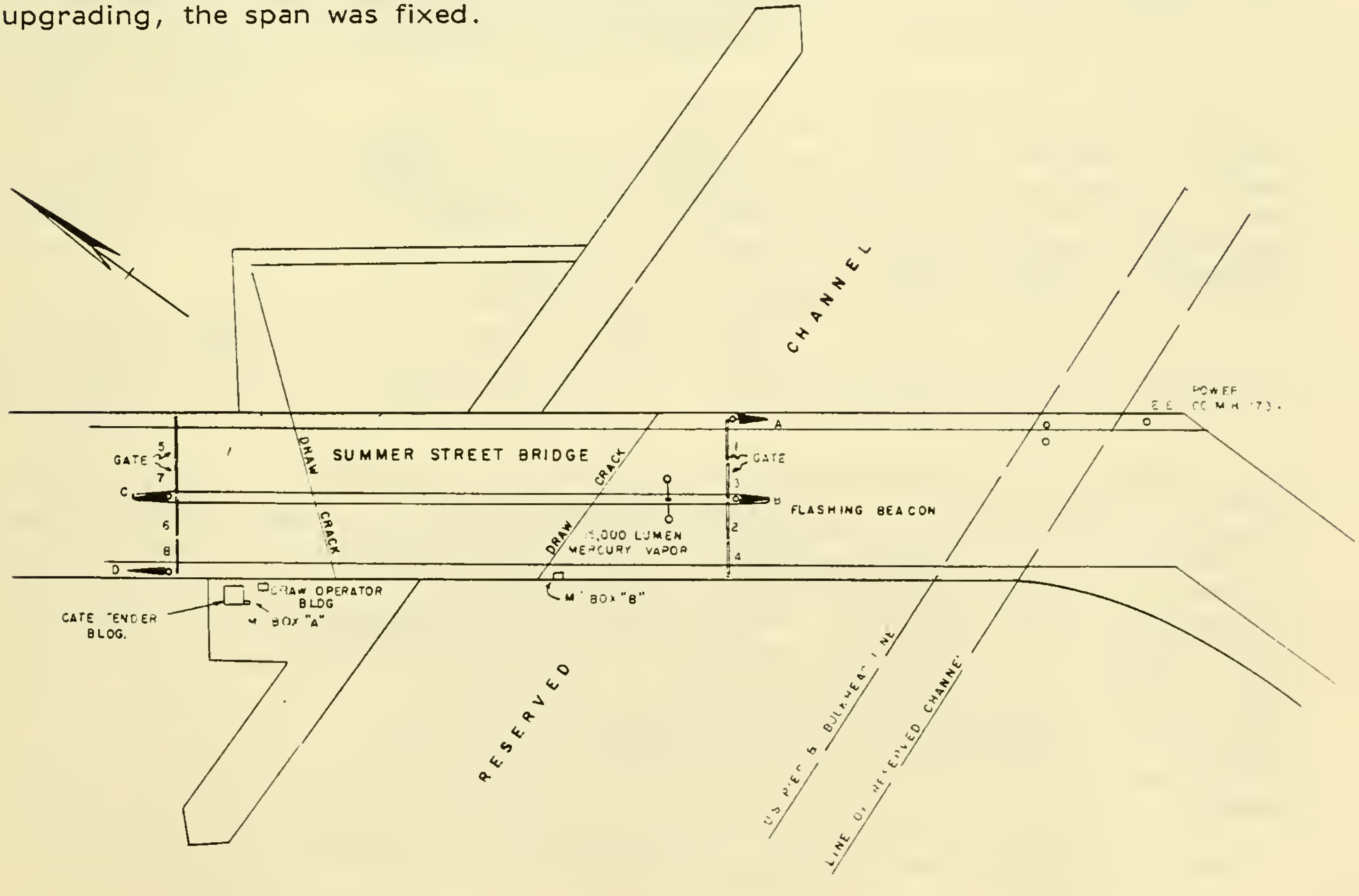
Although it failed to meet the expectations of its promoters, the pier did serve as an important freight and passenger terminal for another forty years. The pier handled large shipments of imported wool for the wool merchants, whose warehouses lined nearby Summer and Congress Streets. When passenger service was resumed, the pier served as a Port of Entry for immigrants to the United States. Today the pier continues to act as a docking facility for passenger cruise ships, although the use of containerized cargo has made the freight facilities obsolete. Owned and operated since 1959 by the Massachusetts Port Authority (MASSPORT), the pier is undergoing conversion as a permanent exhibition space for computer manufacturers known as BOSCOM. This development will include office space and restaurants, as well as providing for the rehabilitation and expansion of the pier's ship docking facilities.

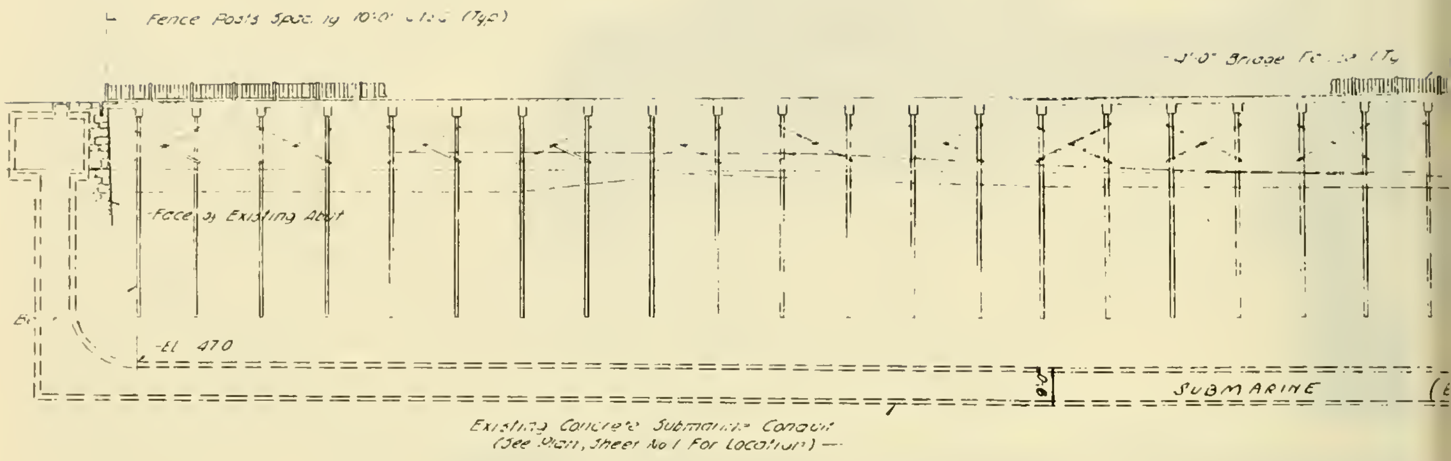
- Peter Stott, Massachusetts Historical Commission



INVENTORY Reserved Channel Bridge

Summer Street at L Street over the Reserved Channel is a rare retractable bridge built in 1891 which was pulled diagonally away from the fixed shore spans on several sets of rails. When the draw was opened, the front ends of the cantilevered span are carried by suspension rods. In the course of an 1983 upgrading, the span was fixed.




Fence Posts Spac. ig 10'0" (Typ)
3'-0" Bridge Fe
Face of Existing Abut
El 470
SUBMARINE
Existing Concrete Submarine Conduit
(See Plan, Sheet No 1 For Location)

L Street at Reserved Channel

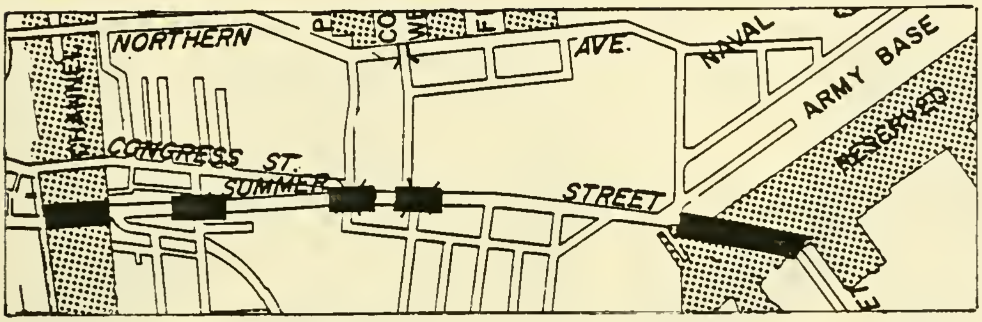
The second oldest metal highway bridge in Boston is the L Street Bridge over the Reserved Channel, built to connect South Boston with the Commonwealth's planned improvement of the South Boston flats. Authorized by the legislature in June 1891, the bridge was not completed until late in 1892.

The bridge is a rare moveable type known as a "retractile draw", in which the moving span is pulled diagonally away from the fixed shore spans on several sets of rails. Characteristic of the superstructure is the king-post truss arrangement. When the draw is opened, the front ends of the cantilevered channel span are carried by suspension rods passing over "Samson posts" erected at the middle of the span and then back to the rear end of the span.

The invention of the retractile draw has been credited to the engineer, T. Willis Pratt (1812-1875).

The bridge is 60 feet wide between the railings. The drawway itself is 40 feet in width. The contract for building and erecting the draw was made with the King Bridge Company of Cleveland, Ohio, whose identifying bridge plates are still in place. The contract for the rest of the bridge and engine house went to William L. Miller of Boston; the machinery was built by Miller & Shaw of Cambridge; and the trucks were furnished by Charles Carr of Boston. Steam power was used to operate the L Street span, though it was later electrified. In the course of rehabilitation in 1983, the bridge was made a fixed span by removal of the electric motors.

- Peter Stott, Massachusetts Historical Commission



NATURE OF PROJECT:

Repair or Replacement - Upgrading Connection in Existing Right-of-Way

Summer Street City Bridges Project

There are six Summer Street bridges connecting the northern industrial section of South Boston to the regional highway network. Five of these bridges are owned by the City and have been analyzed recently to determine needed repair. The sixth, over the Conrail tracks, is owned by the Commonwealth of Massachusetts. It requires no remedial work. Deteriorated conditions have resulted in reduced load capability for some of these structures. As a result, heavy trucks must detour to other streets causing congestion and safety hazards on those other streets.

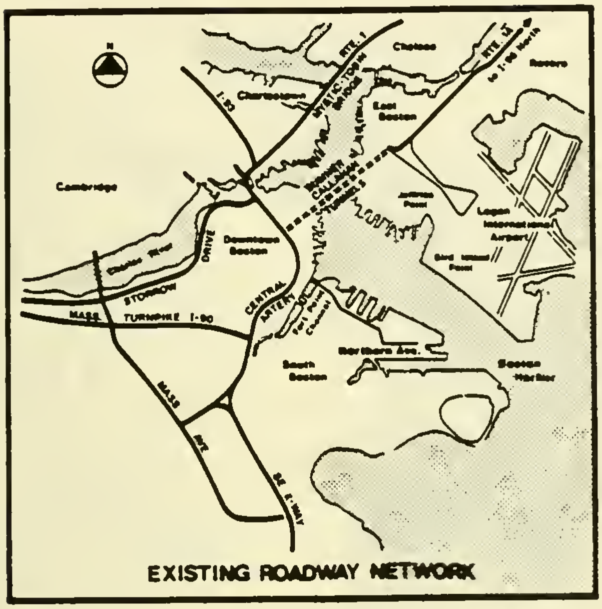
Three of the bridges, A Street, B Street and the bridge over the Fort Point Channel all have a deadload problem necessitating slab or deck replacement. The bridge over C Street has a similar deadload problem but the proximity to the viaduct constrains the pavement stripping option and necessitates total bridge reconstruction.

The Reserved Channel Bridge needs additional stringers, and repairs to the grid would eliminate the current problem of grid damage caused by heavy trucks.

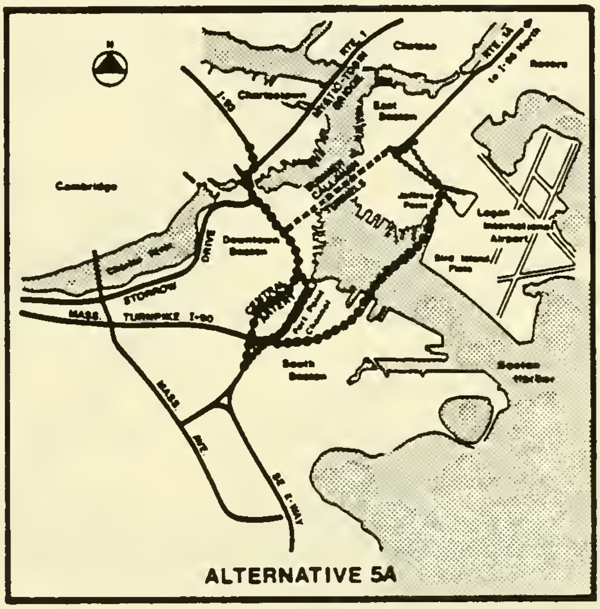
City bridge consultants have recommended a program of minimal repairs to the City-owned Summer Street Bridges to increase their loading capacity to allow 36-ton loads carried in five-axle vehicles. The estimated cost for this work is $1,100,000.

Projections of traffic volumes to the Year 2000 indicate an 80% increase in trucks using Summer Street based on new development activities in South Boston and ordinary traffic growth. This clearly indicates the need to insure the Summer Street bridges are adequate to accommodate these trucks, many of which will be carrying heavy cargo.

The repair of the bridge over Conrail should be planned mindful of the possibility of a new Spine Road being built in the Conrail Yards connecting Northern Avenue to West First Street. Such a road will need adequate clearance under the Summer Street Bridge. Thus, some grade adjustment may be required in the bridge.



EXISTING ROADWAY NETWORK



ALTERNATIVE 5A

Third Harbor Tunnel Project

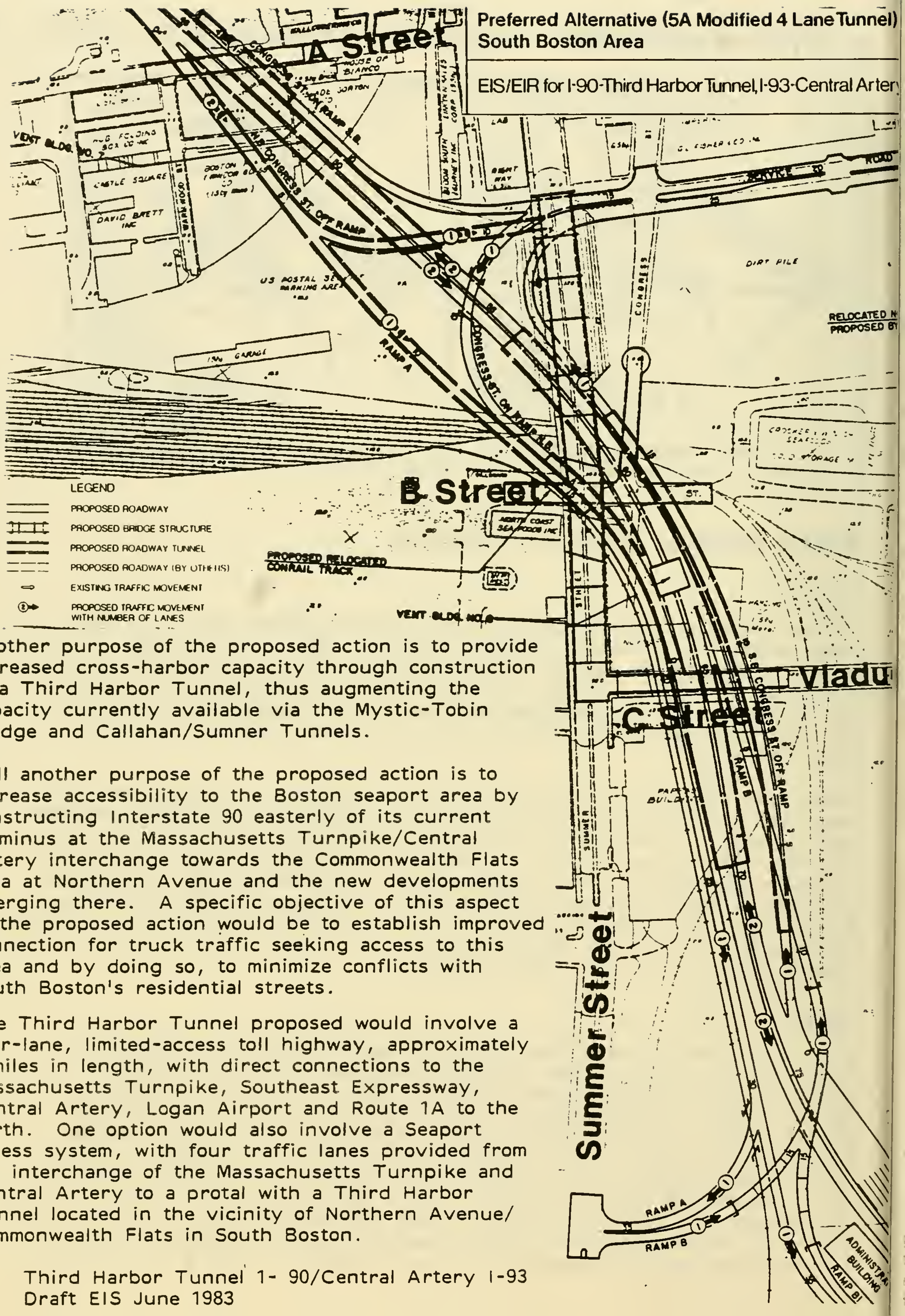
Context

The possibility of major investment in the Central Artery and an additional cross harbor facility have been under discussion for several decades. The Artery, also known as the John Fitzgerald Expressway, was constructed in the period 1954-1959. It was planned as part of a transportation program for the Boston region which was generated early in the post-World War II period, and which had recommended construction of numerous expressway facilities inside Route 128.

These same post-war plans had also urged construction of certain other radial and inner belt expressways which were to connect with the already congested Central Artery. The Boston Transportation Planning Review concluded in 1972 that the provision of high quality radial transportation in the core area should be primarily by public transportation, with selected improvements to the regional highway network to help solve critical transportation problems in Boston's core area. Among the latter, as articulated by Commonwealth officials in 1972, were the possible reconstruction of the Central Artery, and the possible addition of a third harbor crossing.

Purpose of Action

A major purpose of the highway project under review in this Supplemental DEIS/DEIR is to improve flow of traffic using the Central Artery and the numerous other regional highway facilities connecting with it. These facilities service regional through traffic; traffic to downtown; traffic traveling within the downtown on surface streets; traffic to and from East Boston, Logan Airport and the North Shore; and traffic destined for the rapidly developing seaport area in the vicinity of the Northern Avenue/Commonwealth Flats in South Boston (see previous figure). Unless improvements are made to increase the capacity of the Artery and revise ramp connections and the surface arterial in the downtown area, Artery congestion will continue and worsen, severely affecting the operation of Boston's regional network in the core area.


Preferred Alternative (5A Modified 4 Lane Tunnel)
South Boston Area

EIS/EIR for I-90-Third Harbor Tunnel, I-93-Central Arter

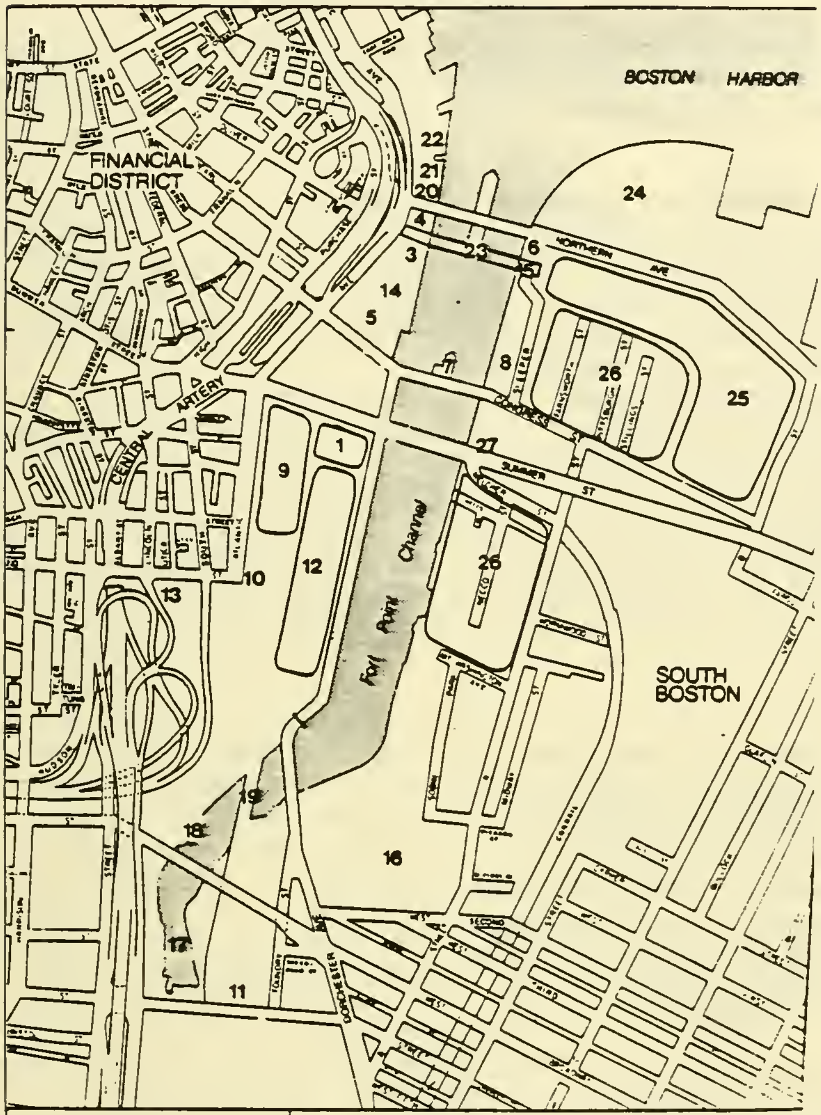
A Street
B Street
C Street
Summer Street
Viadu
LEGEND
PROPOSED ROADWAY
PROPOSED BRIDGE STRUCTURE
PROPOSED ROADWAY TUNNEL
PROPOSED ROADWAY (BY OTHERS)
EXISTING TRAFFIC MOVEMENT
PROPOSED TRAFFIC MOVEMENT WITH NUMBER OF LANES
VENT BLDG. NO. 7
VENT BLDG. NO. 8
CASTLE SQUARE
DAVID BRETT INC
US POSTAL SERVICE PARKING AREA
CONGRESS ST. OFF RAMP
CONGRESS ST. ON RAMP A.B.
CONGRESS ST. ON RAMP S.B.
RAMP A
RAMP B
RAMP B1
S.B. CONGRESS ST. OFF RAMP
DIRT PILE
PROPOSED RELOCATED CONRAIL TRACK
NORTH COAST SEA FOODS INC
RELOCATED N
PROPOSED BY
ADMINISTRATION BUILDING
DORCHESTER AVE
ST.

Another purpose of the proposed action is to provide increased cross-harbor capacity through construction of a Third Harbor Tunnel, thus augmenting the capacity currently available via the Mystic-Tobin Bridge and Callahan/Sumner Tunnels.

Still another purpose of the proposed action is to increase accessibility to the Boston seaport area by constructing Interstate 90 easterly of its current terminus at the Massachusetts Turnpike/Central Artery interchange towards the Commonwealth Flats area at Northern Avenue and the new developments emerging there. A specific objective of this aspect of the proposed action would be to establish improved connection for truck traffic seeking access to this area and by doing so, to minimize conflicts with South Boston's residential streets.

The Third Harbor Tunnel proposed would involve a four-lane, limited-access toll highway, approximately 3 miles in length, with direct connections to the Massachusetts Turnpike, Southeast Expressway, Central Artery, Logan Airport and Route 1A to the north. One option would also involve a Seaport access system, with four traffic lanes provided from the interchange of the Massachusetts Turnpike and Central Artery to a protal with a Third Harbor Tunnel located in the vicinity of Northern Avenue/ Commonwealth Flats in South Boston.

- Third Harbor Tunnel I- 90/Central Artery I-93 Draft EIS June 1983



1 Land Uses Identified in Text

Figure 14
Major Land Uses—Fort Point Channel

0 200 400 800 Feet

EIS/EIR for I-90, The Third Harbor Tunnel

Fort Point Channel

1. Stone and Webster Corp.
2. Federal Reserve Bank
3. Harbor Plaza
4. Hook Lobster Company
5. Russia Wharf
6. Neptune Lobster Company
7. The Boston Tea Party Ship Museum
8. Children's Museum
9. South Station Transportation Center
10. Rail Yards (commuter rail/Amtrak)
11. MBTA Red Line Southampton Yard
12. South Postal Annex
13. Boston Edison Kneeland Street Generating Plant (proposed Wang Corp. development)
14. Boston Edison Substation
15. McKie Lighter Company
16. Gillette Company
17. MDC Combined Sewer Overflow Treatment Facility (proposed)
18. MBTA Wye Connector (proposed)
19. MBTA (Old Colony) Railroad Bridge
20. Appraisers Stores Renovation
21. Bain Building
22. Rowe's and Foster's Wharves
23. Northern Avenue Bridge
24. Athana's Pier's 1-4
25. Penn Central Parcel
26. Rose Associates/Town and Cities Properties
27. 303 Congress Street

Major Land Uses-1982 EIS

3.2.4 Fort Point Channel

Fort Point Channel is located between Boston and the northern section of South Boston. Land surrounding the Channel is devoted predominantly to commercial, industrial and transportation uses. Although the area has no formal designation as a neighborhood, it is perceived as a distinct land use area adjacent to downtown Boston. Major facilities are shown on Figure 14 and listed in Table 4.

The South Station area is occupied mostly by large public facilities, including several transportation facilities undergoing renovation. Over 3.5 million riders each year use the railroad and commuter rail facilities at South Station. (9) The South Postal

Annex, (12) Boston's central mail distribution facility located adjacent to South Station generates 900 truck trips per week and employs 9,800 people. Also located in the area are the Trailways Bus Station, and MBTA subway car storage.

Until recently the Boston side of Fort Point Channel was dominated by warehouses and vacant land used for parking. Recently, the area has been the site of significant office development; from the Harbor Towers complex to the Stone and Webster Building (1) on Summer Street, the area is almost entirely devoted to professional office space, reflecting its location on the periphery of the Financial District. (Although the Central Artery west of Atlantic Avenue remains a barrier to th downtown Financial District, its influence as a dividing line has declined as more office buildings have been built or renovated east of it). The James Hook Company, (14) a wholesaler of live lobsters, also located in the area, is an exception to the general pattern of activity and occupies a substantial underutilized developable parcel.

Rents are approaching $30 per square foot per year in rehabilitated space, and land values are approximately $200 per square foot. A small number of retail establishments serving office employees are located on the ground floors of several office buildings. Approximately 12,000 employees work in over 3 million square feet of office space, many of them parking across the Fort Point Channel in South Boston. The area generates about 100 truck trips per week.

The South Boston side of Fort Point Channel is characterized by mixed warehousing, commercial and industrial uses in older (late 19th century 20th century) buildings of one to ten stories. There are also a number of abandoned rail yards, many of which are used as parking lots. A few marine-related companies remain along the Channel bulkhead. Museum Wharf, (8) which houses the Children's Museum, has been landscaped as a park with a public access easement held by the Boston Parks and Recreation Commission. The Museum attracts over 500,000 visitors annually.

Industrial uses in this area include light manufacturing, printing and publishing, clothing manufacturing, wallcovering distribution, and seafood processing. As in the South End, these industries are attracted by the area's central location and inexpensive space which more than compensates for poor loading facilities and multi-story building layout. (The Gillette Company, (16) with its own modern facilities, is an important exception.) Rents of $2.50-$5.00 per square foot per year are typical of these buildings.

A number of buildings have loading docks which face directly onto Summer, Congress, or A Streets, or onto side streets. On-street loading disrupts the area's traffic circulation. Approximately 1,000 truck trips occur weekly in this area.

Commercial uses include furniture and houseware retailers, art galleries, studios, restaurants, commercial parking lots, and office space. A small number of buildings on Sleeper and A Streets have been converted to residential use.

As with the industrial users, the area's low cost space is attractive to retailers. Restaurants and offices are attracted to this section of Fort Point Channel because of its proximity to downtown Boston, and pay rentals approaching $19 per square foot per year in renovated space. For condominium conversion and some office uses, the historic character of the area and its proximity to the Channel itself are significant amenities.

There are numerous development proposals for the Fort Point Channel area, due to its potential water-related amenities and convenient location. The proposals include major new office and residential developments and continued rehabilitation of existing structures for office and condominiums.

Specific changes include improvements to the South Station Transportation Center which are currently underway, construction of a new Northern Avenue Bridge, (23) and development of the Athanas Pier 1, (24) Cabot, Cabot and Forbes, (25) and Rose parcels (26). Employment in the area is expected to increase dramatically as these changes take place. Truck volumes may decrease somewhat as the area's economy shifts to office uses. Trips to the airport and across the Channel bridges will increase.

The Channel area, a potential National Register Historic District, has been the focus of several marine-oriented recreational land use concepts. The Boston Harbor Associates, Boston Educational Marine Exchange, Boston Conservation Commission, Sierra Club, and other groups have presented concept plans or voiced support for such plans. Access problems and poor water quality have hampered revitalization of the area, particularly for recreation uses.

Draft EIS Report

Third Harbor Tunnel Project, Interstate 90

December, 1982

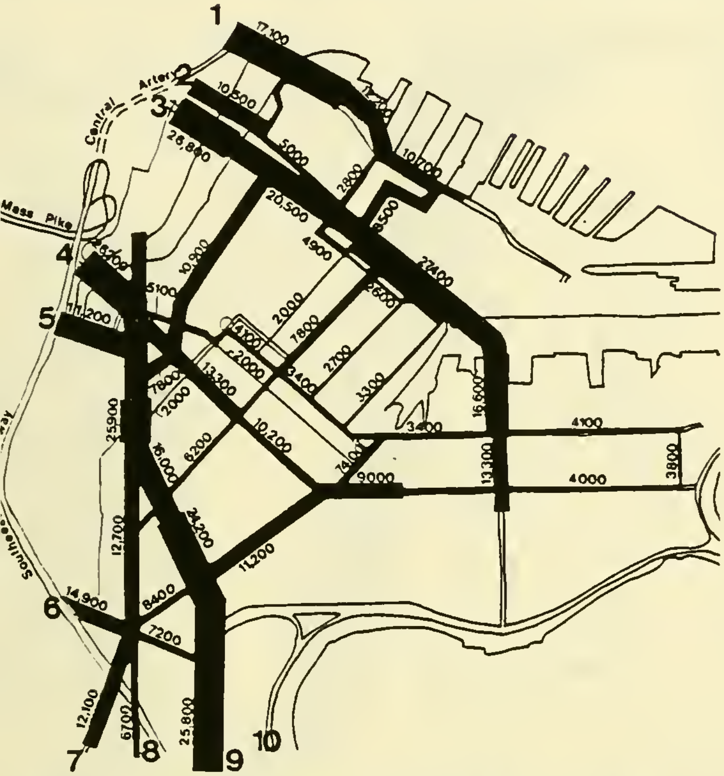


FIGURE 4-3 AVERAGE WEEKDAY TRAFFIC VOLUMES (1979)

40,000
20,000
0

TOTAL VEHICLES PER DAY (INCLUDING TRUCKS)

ENTRANCE POINTS TO SOUTH BOSTON

1 NORTHERN AVENUE
2 CONGRESS STREET
3 SUMMER STREET
4 BROADWAY
5 WEST FOURTH STREET
6 SOUTHAMPTON STREET
7 BOSTON STREET
8 DORCHESTER AVENUE
9 COLUMBIA ROAD
10 DAY BOULEVARD

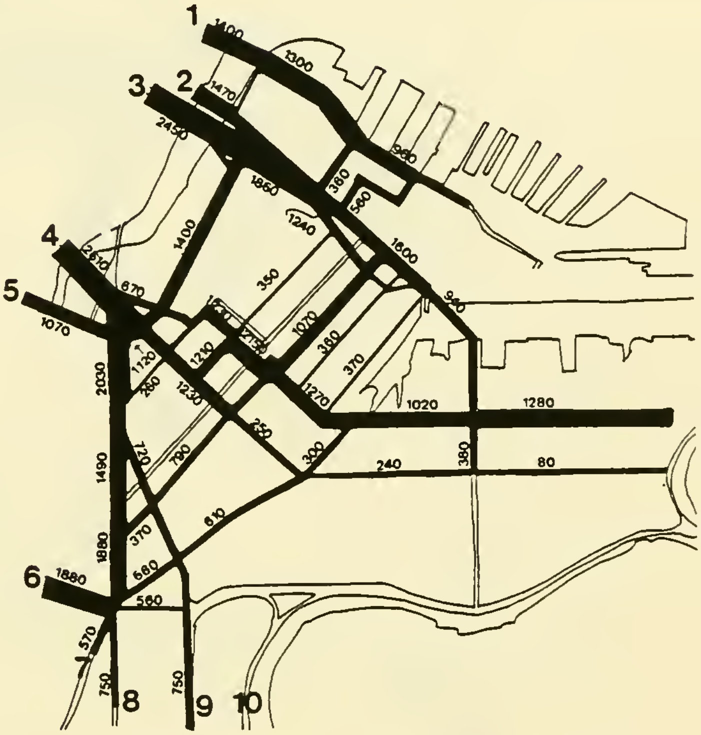


FIGURE 4-4 AVERAGE WEEKDAY TRUCK VOLUMES (1979)

4000
2000
0

TRUCKS PER DAY (24 HOUR TOTAL)

ENTRANCE POINTS TO SOUTH BOSTON

1 NORTHERN AVENUE
2 CONGRESS STREET
3 SUMMER STREET
4 BROADWAY
5 WEST FOURTH STREET
6 SOUTHAMPTON STREET
7 BOSTON STREET
8 DORCHESTER AVENUE
9 COLUMBIA ROAD
10 DAY BOULEVARD

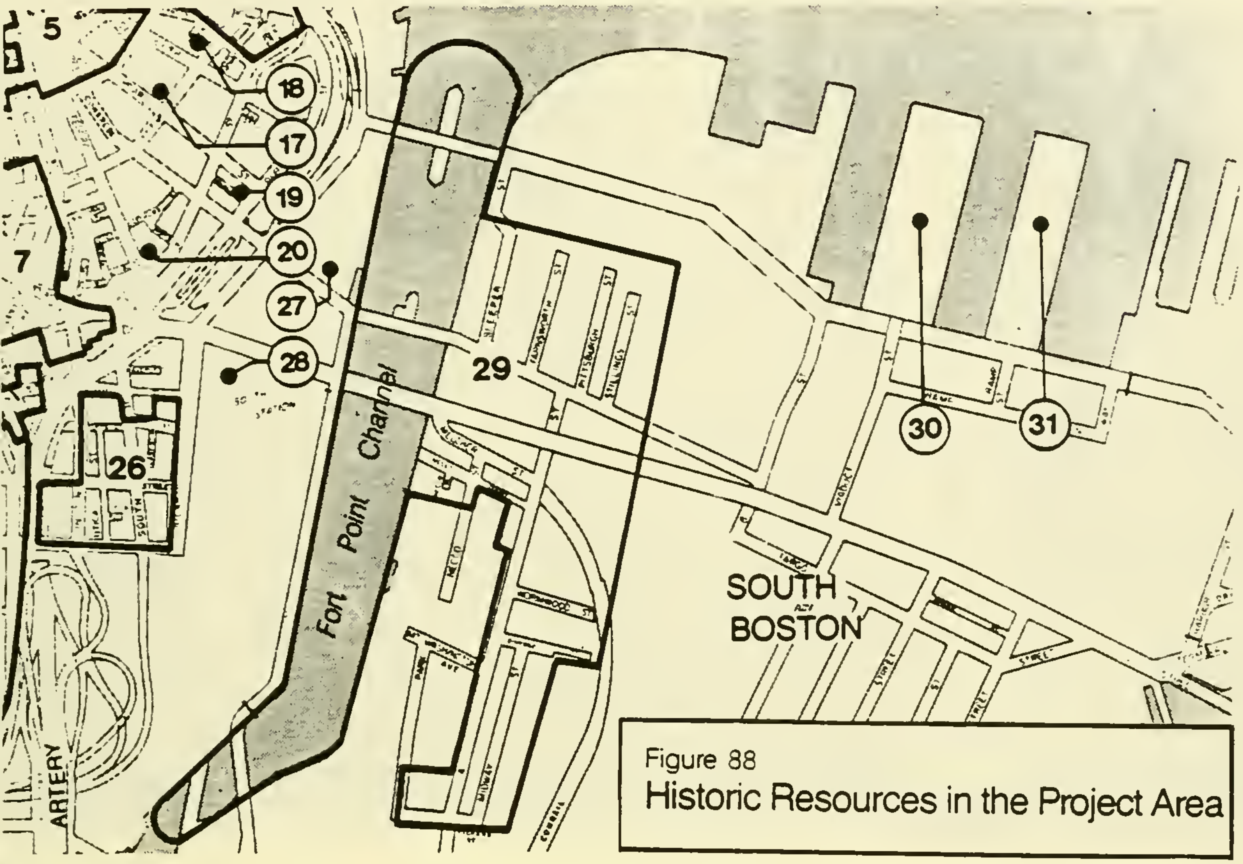


Figure 88
Historic Resources in the Project Area

Historic Properties-1982 EIS

3.10 Historical and Archaeological Resources

Boston Waterfront and Fort Point Channel

11. Fort Point Channel District - (1880 - 1930's
Potential National Register District

The Fort Point Channel area, including the Channel itself, the bridges over it, and the wharves, warehouses and transportation facilities on either side of it, comprise a physical record of the complex transportation developments which necessarily accompanied the rapid industrial expansion of Boston in the late nineteenth and early twentieth centuries, and is a symbolic vestige of the original Shawmut Peninsula. It is potentially eligible for the National Register.

The district includes the following contributing elements.

a. The Fort Point Channel (ca. 1890's)

Historic Waterway bordered by granite bulkheads, created as part of late nineteenth century industrial/transportation development of South Boston.

b. The Northern Avenue Bridge (1908)

Pivotal lift swing bridge; it has been determined eligible for National Register.

c. Congress Street Bridge (1930)

Single-leaf bascule bridge; it represents the final period of development of the Channel and warehouse subdistrict.

d. Summer Street Bridge (1898)

A retractible bridge, a design developed in Boston; although inoperable it is one of only two remaining such bridges in the city.

e. Old Colony Railroad Bridge (1899)

A Scherzer rolling lift bridge, perhaps the most important of South Boston's many bridges.

f. Boston Wharf Company Warehouse District (1880-1930)

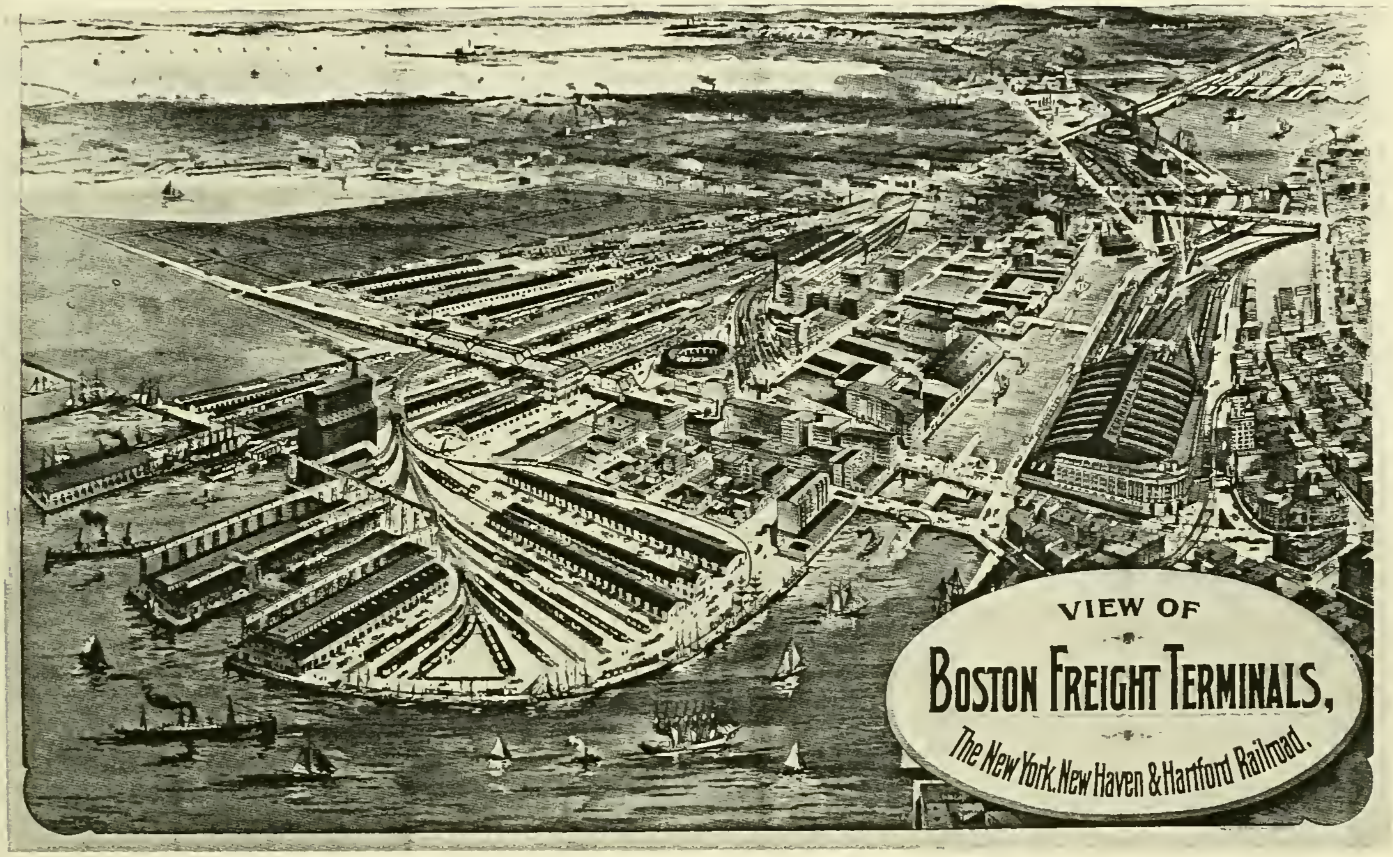
A unified district of late nineteenth and early twentieth century industrial buildings built by the Boston Wharf Company.

g. Factory Buildings Trust/A Street Industrial Buildings

Extention of the Boston Wharf Company industrial development; industrial buildings dating from 1890's - 1930's.

12. Russia Wharf Buildings (1897 - 1898)

518-540 Atlantic Avenue; 270, 276-290 Congress Street.


VIEW OF
BOSTON FREIGHT TERMINALS,
The New York. New Haven & Hartford Railroad.

History of the Fort Point Channel Bridges

What is presently the Fort Point Channel area was, until the early 19th century, marshland and tidal flats. By the late 19th century, Boston was laced with a complex network of channels, canals and river entrances. The intersection of these busy waterways with an expanding road network developed on filled land created the need for scores of moveable bridges throughout the city. Travel in almost any direction from center of the city was often interrupted by the operation of these devices, which were a common feature of the waterfront. By the early 20th century eight such bridges crossed over Fort Point Channel to serve new development in South Boston. The importance of these structures can be judged by the fact that during the 1890's, nearly 19,000 vessels, steamers, sailing boats and tugs passed through the Congress Street Bridge carrying cotton, molasses, spices, wood, dye, fruit, shoes, and cattle, among other cargo. The seven which remain today include:

> Dover/West Fourth Street -- The earliest bridge route to South Boston was first built in 1805. It was rebuilt again in 1858 and the present structure dates back to 1876; it consisted of a fixed span and a simple drawbridge. Today, only the fixed portion remains.

Broadway -- First built in 1871, later replaced by a swing bridge in 1914.

Old Colony RR -- An 1886 drawbridge, later replaced by the rolling bascule bridge now servicing South Station.

Dorchester Avenue -- Originally a retractible bridge, now fixed in place and owned by the U.S. Postal Service.

Summer Street -- Originally a railroad bridge, replaced in 1898 by a retractible bridge, where the current Summer Street was constructed. The retractible bridge type was a design unique to Boston and used at many locations. Today, only 2 remain: at Summer Street, which has been fixed in place, and further along the same route at L Street in South Boston, which still operates.

Congress Street -- A single leaf bascule bridge, built in 1930 to replace an earlier draw bridge. The current structure contains elegant light standards; its counterweight still hangs poised over Congress Street, although the bridge has been fixed.

Northern Avenue -- A 1908 swing bridge of steel and concrete; the last route across the channel to be opened to traffic.

The foundations and abutments of two additional bridges that have been removed -- Federal and Mt. Washington Streets -- can still be seen in the Channel. Although in some cases altered, the collection of remaining bridges represent a significant grouping of 19th century engineering works. They are also a last remaining remnant of the old waterfront that contributes greatly to the Channel's 19th century setting.

BOSTON PUBLIC LIBRARY
3 9999 06315 526 9